# Academic Calendars

## 2013 – 2014
### Fall Quarter 2013
- Quarter begins: September 23
- Instruction begins: September 26
- Veterans Day holiday: November 11
- Thanksgiving holiday: November 28–29
- Instruction ends: December 6
- Common final examinations: December 7–8
- Final examinations: December 9–13
- Quarter ends: December 13

### Winter Quarter 2014
- Quarter begins: January 2
- Instruction begins: January 6
- Martin Luther King, Jr. holiday: January 20
- Presidents' Day holiday: February 17
- Instruction ends: March 14
- Common final examinations: March 15–16
- Final examinations: March 17–21
- Quarter ends: March 21

### Spring Quarter 2014
- Quarter begins: March 26
- César Chávez holiday: March 28
- Instruction begins: March 31
- Memorial Day holiday: May 26
- Instruction ends: June 6
- Common final examinations: June 7–8
- Final examinations: June 9–13
- Quarter ends: June 13
- Commencement ceremonies: June 13–15

## 2014 – 2015
### Fall Quarter 2014
- Quarter begins: September 29
- Instruction begins: October 2
- Veterans Day holiday: November 11
- Thanksgiving holiday: November 27–28
- Instruction ends: December 12
- Common final examinations: December 13–14
- Final examinations: December 15–19
- Quarter ends: December 19

### Winter Quarter 2015
- Quarter begins: January 5
- Instruction begins: January 9
- Martin Luther King, Jr. holiday: January 19
- Presidents' Day holiday: February 16
- Instruction ends: March 13
- Common final examinations: March 14–15
- Final examinations: March 16–20
- Quarter ends: March 20

### Spring Quarter 2015
- Quarter begins: March 25
- César Chávez holiday: March 27
- Instruction begins: March 30
- Memorial Day holiday: May 25
- Instruction ends: June 5
- Common final examinations: June 6–7
- Final examinations: June 8–12
- Quarter ends: June 12
- Commencement ceremonies: June 12–14

## Online Publications
The UCLA General Catalog is available at [http://www.registrar.ucla.edu/catalog/](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/](http://www.registrar.ucla.edu/schedule/) has the most current information about fees, deadlines, and courses.

[http://www.registrar.ucla.edu](http://www.registrar.ucla.edu)
UCLA
General Catalog

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Cover, clockwise from top left: students listen to instructors in a small discussion section; UCLA's All-Americans wall in the newly-renovated Pauley Pavilion; students work together on a project in Young Library's Café 451; graduates participate in commencement; student investigates in a laboratory; bronze statue of Coach John Wooden by renowned sculptor Blair Buswell; NASA's Dawn satellite, whose mission is led by UCLA professor Christopher T. Russell, on its way to discoveries about protoplanet Vesta; architectural detail, Humanities Building.

Title page: Students on their way to class across Dickson Plaza pass iconic Powell Library. Photo by Stephanie Diani.


The UCLA General Catalog is available online at http://www.registrar.ucla.edu/catalog/.

Every effort has been made to ensure the accuracy of the information presented in the UCLA General Catalog. However, all courses, course descriptions, instructor designations, curricular degree requirements, and fees described herein are subject to change or deletion without notice.

The departmental websites referenced in department addresses in this catalog are maintained by independent operators and do not necessarily reflect approved curricula and courses information. Consult the online Catalog for the most current, officially approved courses and curricula.

Other information about UCLA may be found in the announcements of the Schools of Dentistry, Education and Information Studies, Engineering and Applied Science, Law, Management, Medicine, Nursing, Public Affairs, and Public Health, and in literature produced by the School of the Arts and Architecture and School of Theater, Film, and Television. The most current information on graduate programs is available at http://www.grad.ucla.edu, which contains a link to Graduate Division publications, including Program Requirements for UCLA Graduate Degrees that contains the complete text for officially approved graduate programs.

UCLA is a premier American public research institution, and courses at UCLA are taught in the English language, unless otherwise noted in the course description (for example, foreign language courses).

UCLA Accreditation
UCLA is accredited by the Western Association of Schools and Colleges and by numerous special agencies. Information regarding the University's accreditation may be obtained in the Office of Academic Planning and Budget, 2107 Murphy Hall.

Western Association of Schools and Colleges
985 Atlantic Avenue, Suite 100
Alameda, CA 94501
(510) 748-9001

University of California, Los Angeles
Los Angeles, CA 90095-1361
Main telephone: (310) 825-4321
Speech- and hearing-impaired access: TTY (310) 825-2833
http://www.ucla.edu
This Catalog describes the almost endless academic choices available to you at UCLA. Choose from 5,000 courses each term, 128 undergraduate majors, 87 master’s programs, 110 doctoral and professional programs, and 87 minors as you build a course of study that suits your own interests and aspirations. The size and scope of our campus enables us to offer you a remarkable range of academic possibilities. At the same time, almost 70 percent of our undergraduate classes have fewer than 30 students so you can get to know your professors and classmates.

Your fellow students at UCLA come from incredibly diverse backgrounds. Those admitted to our freshman class for 2013-14 are from 50 states and 69 countries. But, like you, all of them are driven by an unwavering commitment to excellence and a determination to make a difference wherever they go.

Our faculty of more than 4,300 is made up of renowned scholars who are highly regarded as leaders in their fields. Undergraduates, as well as graduate students, have opportunities to study with top professors and conduct research under their guidance.

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

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

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

Gene D. Block
Chancellor
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**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.

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

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

**Asian American Studies Department**

**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 Department**
Atmospheric, Oceanic, and Environmental Sciences .......... B.S.
Atmospheric and Oceanic Sciences .......... 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 .......... B.S.
General Chemistry .......... B.S.

**Chicana and Chicano Studies Department, César E. Chávez**
Chicana and Chicano Studies .......... B.A., M.A., 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 Department**
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/Geosciences .......... B.S.
Geophysics/Geosciences and Space Physics .......... B.S.
Marine Biology .......... B.S.

**East Asian Studies Interdepartmental Program**
East Asian Studies .......... M.A.

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

**Economics Department**
Economics .......... B.A., M.A., C.Phil., Ph.D.

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

**French and Francophone Studies Department**
French .......... B.A.

**Gender Studies Department**
Gender Studies .......... B.A., M.A., Ph.D.

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

**German 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.

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

**Indo-European Studies Interdepartmental Program**
Indo-European Studies .......... C.Phil., Ph.D.

**Institute for Society and Genetics, Center for Interdisciplinary Instruction**
Human Biology and Society .......... B.A., B.S.

**Institute of the Environment and Sustainability, Center for Interdisciplinary Instruction**
Environmental Science .......... B.S.
Environmental Science and Engineering .......... D.Env.

**Integrative Biology and Physiological Sciences Department**
Physiological Science .......... B.S., M.S.

**International and Area Studies Interdepartmental Program**
African and Middle Eastern Studies .......... B.A.
Asian Studies .......... B.A.
European Studies .......... B.A.
Latin American Studies .......... B.A.

**International Development Studies Interdepartmental Program**
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**
Italian and Special Fields .......... B.A.

**Latin American Studies Interdepartmental Program**
Latin American Studies .......... M.A.

**Linguistics Department**
Linguistics .......... B.A., M.A., C.Phil., Ph.D.

**Languages and Cultures Department**
Languages .......... B.A.

**Mathematics Department**
Mathematics .......... B.S.
Financial Actuarial Mathematics .......... B.S.

**Mathematics/Economics Interdepartmental Program**
Mathematics .......... B.S., M.A., C.Phil., Ph.D.

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

**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**
Near Eastern Languages and Cultures .......... B.A.

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

**Philosophy Department**
Philosophy .......... B.A., M.A., C.Phil., Ph.D.
GRADUATE SCHOOL OF EDUCATION AND INFORMATION STUDIES

Education Department
Education . . . . M.A., M.Ed., Ed.D., Ph.D.
Economic Administration
Joint Ed.D. with UCI

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 SAMUEL SCHOOL OF ENGINEERING AND APPLIED SCIENCE

Bioengineering Department
Bioengineering . . . M.S., 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 . . . M.S., M.S., Ph.D.

Electrical Engineering Department
Electrical Engineering . . . . M.S., Ph.D.

Engineering Schoolwide Programs
Engineering . . . . . . . . M.Eng., M.S., Engr.

Materials Science and Engineering
Materials Engineering . . . . B.S.

Mechanical and Aerospace Engineering Department
Mechanical Engineering . . . 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 Planning Department
Urban and Regional Planning . . . M.U.R.P.

SCHOOL OF THE ARTS AND ARCHITECTURE

Architecture and Urban Design Department
Architecture . . . . . . . . . . B.A., Architecture

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

Design | Media Arts Department
Design | Media Arts . . . . . . B.A., M.F.A.

Ethnomusicology Department
Ethnomusicology . . . . B.A., M.A., Ph.D.

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

Music Department
Music . . . . . . . . . . . . . . . . . . . . B.A., M.F.A.

World Arts and Cultures/Dance Department
World Arts and Cultures . . . . . B.A.

SCHOOL OF DENTISTRY

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

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

SCHOOL OF LAW

Law Department
Law . . . . . . . . . . . . . . . . . . . . . . I.L.M., J.D., S.J.D.

SCHOOL OF NURSING

Nursing Department
Nursing . . . . . . . . M.S., B.S.

SCHOOL OF THEATER, FILM, AND TELEVISION

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

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

Moving Image Archive Studies
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.

JOHN E. ANDERSON GRADUATE SCHOOL OF MANAGEMENT

Management Department
Management . . . . M.B.A., EMBA, FEMBA, GEMBA

FINANCIAL ENGINEERING
Financial Engineering . . . M.F.E.

MANAGEMENT
Management . . . . . M.S., C.Phil., Ph.D.

JONATHAN AND KARIN FIELDING SCHOOL OF PUBLIC HEALTH

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

Community Health Sciences Department
Community Health Sciences . . . M.P.H.-HP, M.S., Ph.D.

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

Health Policy and Management Department
Health Policy and Management . . . . . . . . M.P.H., M.S., Ph.D.

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

PUBLIC HEALTH SCHOOLWIDE PROGRAMS
Preventive Medicine and Public Health . . . M.S.

PUBLIC HEALTH
Public Health . . . . M.P.H., Dr.P.H.
Undergraduate Minors and Specializations

**MINORS**

**College of Letters and Science**
- African and Middle Eastern Studies
- African Studies
- Afro-American Studies
- American Indian Studies
- Anthropology
- Applied Developmental Psychology
- Arabic and Islamic Studies
- Armenian Studies
- Art History
- Asian American Studies
- Asian American Studies Interdepartmental
- Asian American Studies Interdepartmental
- Asian American Studies
- 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
- English
- Environmental Systems and Society
- European Studies
- Evolutionary Medicine
- French
- Gender Studies
- Geochemistry
- Geography
- Geography/Environmental Studies
- Geology
- Geophysics and Planetary Physics
- Geospatial Information Systems and Technologies
- German
- Germanic Languages

Global Studies
- Greek
- Hebrew and Jewish Studies
- History of Science and Medicine
- Israel Studies
- Italian
- Labor and Workplace Studies
- Language Teaching
- Latin
- Latin American Studies
- Lesbian, Gay, Bisexual, and Transgender Studies
- Linguistics
- Mathematical Biology
- Mathematics
- Mexican Studies
- Music History
- Naval Science
- Near Eastern Languages and Cultures
- Neuroscience
- Philosophy
- Political Science
- Portuguese
- Russian Language
- Russian Literature
- Russian Studies
- Scandinavian
- Science Education
- Social Thought
- Society and Genetics
- South Asian Studies
- Southeast Asian Studies
- Spanish
- Spanish Linguistics
- Statistics
- Structural Biology
- Study of Religion
- Systems Biology

**Graduate School of Education and Information Studies**
- Education Studies

Henry Samuei School of Engineering and Applied Science
- Bioinformatics
- Environmental Engineering
- John E. Anderson Graduate School of Management
- Accounting
- Jonathan and Karin Fielding School of Public Health
- Public Health
- Meyer and Renee Luskin School of Public Affairs
- Gerontology
- Public Affairs
- Urban and Regional Studies
- School of the Arts and Architecture
- Music Industry
- Visual and Performing Arts Education
- School of Theater, Film, and Television
- Film, Television, and Digital Media
- Theater

**SPECIALIZATIONS**

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

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.

- African Studies Interdepartmental M.A./Public Health M.P.H.
- Afro-American Studies Interdepartmental M.A./Law J.D.
- American Indian Studies Interdepartmental M.A./Law J.D.
- Architecture M.Arch. I/Urban Planning M.U.R.P.
- Asian American Studies Interdepartmental M.A./Public Health M.P.H.
- Asian American Studies Interdepartmental M.A./Social Welfare M.S.W.
- Education M.A., Ph.D., M.Ed., or Ed.D./Law J.D.
- Islamic Studies Interdepartmental M.A./Public Health M.P.H.
- Management M.B.A./Computer Science M.S.
- Management M.B.A./Dentistry D.D.S.
- 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 Health M.P.H./Public Policy M.P.P.
- Public Health M.P.H./Social Welfare M.S.W.
- Public Policy M.P.P./Law J.D.
- Public Policy M.P.P./Medicine M.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.

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

**ARTICULATED DEGREES**

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

- Latin American Studies Interdepartmental M.A./Education M.Ed. in Curriculum
- Latin American Studies Interdepartmental M.A./Library and Information Science M.L.I.S.
- Latin American Studies Interdepartmental M.A./Public Health M.P.H.
- Medicine M.D./Graduate Division health science major Ph.D.
- Oral Biology M.S. or Ph.D./Dentistry D.D.S. or Certificate
- Public Health M.P.H./Medicine M.D.
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 approximately every 15 years. Of the 62 doctoral degree disciplines studied in the 2011 evaluation, 33 UCLA academic departments ranked among the top 10 in the country and 12 ranked among the top 20.

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

This remarkable pool of talent is shared 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, Meyer and Renee Luskin School of Public Affairs and, in the health sciences, the School of Dentistry, David Geffen School of Medicine, and Jonathan and Karin Fielding 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 87 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.

RESEARCH

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

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

Among the 10 leading research universities in the country, UCLA received $1011 million in 2011-12 in extramural grants and contracts to support its research. Each year it hosts hundreds of postdoctoral scholars who share its facilities.

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

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

SERVICE

As a public university, serving the community is one of 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.

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

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 (now called the Humanities Building)—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.
About UCLA

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 202 buildings on 419 acres house the College of Letters and Science plus 11 professional schools and serve more than 41,340 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 37,363 students, is enriched by an additional 3,978 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, 89 percent of lower division lecture classes in 2011-12 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 2012 entering freshman class had an average high school GPA of 4.21, with an average composite score on the SAT Reasoning Test of 1,935 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 69 foreign countries to study at UCLA. Ethnic minorities comprise 70.4 percent of the undergraduates and 61.2 percent of the graduate student population, and international students and scholars presently number over 8,000, 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 programs, including stately Powell Library and iconic Royce Hall—blends with the modern design of newer structures.
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 UC Education Abroad Program (UCEAP), 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 UC Education Abroad Program (UCEAP) offers short- and long-term study programs in cooperation with over 140 host universities and colleges in more than 35 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. While on EAP, students are eligible for financial assistance. See http://www.ieo.ucla.edu/uceap/.

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 summer-time 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) for study abroad and the transfer of credit back to UCLA from other institutions. See http://www.ieo.ucla.edu/nonucprograms/.

SUMMER SESSIONS

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 various subjects 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 infor-
The institute serves the entire UCLA campus via grants and fellowships, as well as student scholarships, for international research and study. It 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, hosting close to 800 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 and learning and helps local, national, and international agencies design, implement, and evaluate modern language programs. See http://www.international.ucla.edu or call (310) 825-4811.

RESEARCH PROGRAMS

At any given time, more than 6,000 funded research programs are in progress at UCLA. For more information on the Organized Research Units listed below, see https://vcr.ucla.edu/organized-research-units-orus-1.

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 27 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 and secondary 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) 825-8030.
The Center for Medieval and Renaissance Studies 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.

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.c1718cs.ucla.edu or call (310) 206-8552.

The center administers the William Andrews Clark Memorial Library, located 13 miles from UCLA, that 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.clarklibrary .ucla.edu or call (323) 731-8529.

The Center for the Study of Women (CSW) draws on the expertise of more than 200 faculty members from 10 professional schools and 34 departments. To facilitate faculty research, the center organizes conferences and lecture series on feminist theory, administers research grants, and offers an affiliation for research and visiting scholars. The center sponsors working groups, produces calendar of events posters, and hosts graduate programs, as well as an annual graduate student research conference. See http://www.csw.ucla.edu or call (310) 825-0590.

The Cotsen Institute of Archaeology (COIOA) 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, Cotsen Digital Archive, 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.

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) 825-4903 or 825-6539.

The Dental Research Institute (DRI) fosters excellence in research, professional research 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 neurophysiology. Research includes molecular oncology, 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/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 African and Middle Eastern 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 Chicanas/Chicanos. See http://www.iac.ucla.edu or call (310) 825-6815.
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.aisc.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 (CSRC) 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.ntrc.npi.ucla.edu/iddrc/home.aspx or call (310) 825-9395 or 825-6429.

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 Architecture, Education and Information Studies, Law, Medicine, Public Affairs, Public Health, and Theater, Film, and Television. The center sponsors public lectures, seminars, publications, and academic exchanges with African institutions and an outreach service to the Southern California community. 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.

Latin American Institute
The Latin American Institute (LAI) is a major regional, national, and international resource on Latin America and hemispheric issues. The institute sponsors and coordinates research, academic and public programs, and publications on Latin America in the humanities, social sciences, and professional schools and links its programs and activities with developments in the field and in other institutional settings. By combining instruction, research, and service and by encouraging multidisciplinary and interdisciplinary approaches, the institute promotes the use of UCLA Latin American resources for the benefit of the campus, the broader community, and the public at large. See http://www.international.ucla.edu/la/ or call (310) 825-4571.

Ralph J. Bunche Center for African American Studies
The Bunche Center for African American Studies (CAAS) conducts and sponsors research on the African American experience, coordinates the Afro-American studies curriculum, publishes research results, and sponsors community service programming. See http://www.bunchecenter.ucla.edu or call (310) 825-7403.
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-fusion confinement experiments, fusion engineering and nuclear technology, computer simulations and the theory of plasmas, space plasma physics and experimental simulation of space plasma phenomena, advanced plasma diagnostic techniques, 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 INSTITUTE FOR GENOMICS AND PROTEOMICS

The UCLA-DOE Institute for Genomics and Proteomics, funded through a Department of Energy (DOE) contract, conducts research in bioenergy, carbon capture, microbial genomics, and structural and functional studies of organisms and their constituents. Institute faculty members have joint appointments in academic departments and teach at both undergraduate and graduate levels. Major facilities include a biomedical cyclotron, advanced scanning equipment, and macromolecular crystallization, nuclear magnetic resonance, protein expression, and X-ray crystallography facilities. See http://www.doe-mbi.ucla.edu/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 California Center for Population Research (http://www.ccppr.ucla.edu)—which carries out basic and applied research and training in demography—and the Jonsson Comprehensive Cancer Center (http://www.cancer.ucla.edu)—one of only 41 comprehensive centers in the nation. For a list of research centers, laboratories, and institutes, see http://www.research.ucla.edu/labs/.

In the health sciences, research ranges from improving the quality of life for Alzheimer patients and caregivers at the UCLA Alzheimer’s Disease Research Center (http://www.eastonad.ucla.edu/nih-adrc-sitemap) to epidemiology, immunology, and the clinical management of AIDS at the UCLA AIDS Institute (http://aidsinstitute.ucla.edu) and the Center for Clinical AIDS Research and Education (http://www.uclalhealth.org/homepage_site.cfm?id=1926). 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 networked 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.csup.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://luskin.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.
FOwER 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 (Melyv), WorldCat, Center for Research Libraries, Online Archive of California, numerous abstracting and indexing databases, and gateways to other systems. The Melyv 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/arts-library or call (310) 206-5425.
The UCLA Library is among the top research libraries in the U.S.

About UCLA

Charlie 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/research-library-charles-e-young or call (310) 825-4732 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, audiotapes, 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-undergraduate-library or call (310) 825-1938 or 825-9389.

Eugene and Maxine Rosenfeld 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/rosenfeld-library 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 678,000 print volumes and 3,170 journal subscriptions. See http://library.ucla.edu/libraries/biomed/louise-m-darling-biomedical-library 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/music-library 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://library.ucla.edu/libraries/eastasian/east-asian-library-richard-c-rudolph 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://library.ucla.edu/libraries/SEL/science-engineering-library 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.bunchecenter.ucla.edu) contains materials reflecting the African American experience in the social sciences, arts, and humanities. The American Indian Studies Center Library (http://www.asc.ucla.edu/library/) 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/) 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), and the William Andrews Clark Memorial Library (http://www.clarklibrary.ucla.edu) contains rare books, manuscripts, and other noncirculating materials on English culture (1641 to 1800). The English Reading Room (http://www.english.ucla.edu/resource/english-reading-room) features a noncirculating collection of British and American literature, literary history, and criticism.

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/imlab 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.cinemao.uc.edu or call (310) 206-8013 or 794-8888.

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 over 100,000 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.

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 https://www.eeb.ucla.edu/dickey/index.php 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

The Ethnomusicology Archive includes recordings and a vast collection of musical instruments from non-Western countries.
ABOUT UCLA

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 specimens. School and community group tours are available as are individual guided tours. See http://www.botgard.ucla.edu or call (310) 825-1260 or 206-6707.

STUNT RANCH SANTA MONICA MOUNTAINS RESERVE
The University of California founded the UC Natural Reserve System (NRS) in 1965 to preserve undisturbed natural areas representing the state’s vast ecological diversity for students, teachers, and researchers from public and private educational institutions to use as outdoor classrooms and living laboratories. The Stunt Ranch Santa Monica Mountains Reserve, administered by the Los Angeles campus, officially joined the UC NRS in November 1995. The 310-acre site is a 40-minute drive from UCLA and includes fine examples of chaparral and oak woodland ecosystems. The reserve lends itself to programs that focus on the natural ecosystems and issues of resource management in the urban/wildland interface. Undergraduate and graduate courses in the departments of Anthropology, Earth and Space Sciences, Ecology and Evolutionary Biology, Geography, Physics and Astronomy, and the Institute of the Environment and Sustainability utilize Stunt Ranch and other NRS sites. See http://stunt ranch.ucnrs.org or call (310) 206-3887.

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 https://www.bol.ucla.edu.

COMPUTER LABORATORIES
Student laboratories are supported through the College Library Instructional Computing Commons (CLICC, http://www.clicc.ucla.edu), a collaborative effort between the Center for Digital Humanities (http://www.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 UCLA undergraduate nontutorial courses 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.
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.

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://shop.uclastore.com/c-330-lecture-notes.aspx or call (310) 825-8016. Course Reader Solutions provides custom course readers, obtaining 5,000 copyright authorizations each year. See http://shop.uclastore.com/c-323-custom-course-readers.aspx 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 General Catalog. WebMail provides students an intuitive way to access private e-mail accounts from any computer via MyUCLA. Letters and Science students are able to obtain additional services, including the ability to view their counseling appointments, check the status of petitions, and track their honors progress. See http://my.ucla.edu or call (310) 206-4525.

UNIVERSITY RECORDS SYSTEM ACCESS

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 noon through Tuesday at 1 a.m. and Tuesday through Saturday from 6 a.m. to 1 a.m., including holidays. See https://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 different steps of the procedure they are trying to accomplish, whether it be to check their billing accounts, change address information, view and print Study Lists or Degree Progress Reports (DPRs) or UCLA Degree Audits, 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 benefits, tutorial assistance, and the work-study program; issues fee waivers to dependents of California veterans who are deceased or disabled because of service-connected injuries and who meet the income restrictions in Education Code Section 16062; and certifies student 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 outpatient clinic for UCLA students. Most services 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. Non-core (fee) services, such as pharmaceuticals, injections, orthopedic devices, 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 insurance 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 information on its primary care, women’s health, men’s health, immunization, health clearance, optometry, travel, and mindbody clinics, as well as on dental care which is available 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 counseling and psychotherapy to crisis counseling.

Counseling and Psychological Services

Counseling and Psychological Services (CAPS) offers short-term personal counsel and psychotherapy in 221 Wooden Center West, (310) 825-0768. Psychologists, clinical social workers, and psychiatrists assist with situational stresses and emotional problems from the most mild to severe. These may include problems with interpersonal relationships, academic stress, loneliness, difficult decisions, sexual issues, anxiety,
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 (ASUCLA) provides services to the campus community through student government, student media, and services and enterprises. Every registered UCLA student is a member of ASUCLA. See http://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 graduate 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://www.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://campuseventsblog.com/cec/ or call (310) 825-1958.

The Cultural Affairs Commission sponsors art exhibits in the Kerckhoff Hall Art Gallery, the JazzReggae Festival, Bruin Bash, Hip Hop Explosion, and Worldfest. See http://www.culturalaffairssla.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://apply.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://dailybruin.com or call (310) 825-2787.

Newsmagazines

Seven print newsmagazines reflecting the diversity of the campus community are published each term. Al-Talib (http://al-talib.org), Fem (http://www.femmagazine.com), Ha’Am (http://haam.org), La Gente (http://lagente.org), Nonmo (http://nonmonewsmag.word press.com), OutWrite (http://outwritenewsmag.org), and Pacific Ties (http://pacificties.org) 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 staff are welcome.

Online Media

Student Media supports the Bruinwalk.com community portal website at http://www.bruinwalk.com. Features include UCLA professor reviews, used book trading, reviews of apartments near UCLA, and a campus calendar.

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://asucla.ucla.edu/ucla-restaurant-hours/.

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://shop.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, and greeting cards.

UCLA Store—Health Sciences, http://shop.uclastore.com/c-321-health-sciences.aspx, (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 text-
books 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.


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 deluxe residence halls, two residential suites, and five residential plazas accommodate over 11,000 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 $11,002. Consult the housing office for the range of price options. See http://map.ais.ucla.edu/go/1004941.

The Office of Residential Life is responsible for student conduct in residence halls and suits and provides professional and student staff members to counsel residents on programming and other problems. See https://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 five 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 membership 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:
views 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://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 is 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://www.upsn.info or call (310) 397-2735.

**Dean of Students**

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

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 Policies.
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 CAMPUS 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, reader service, 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 Services for Study under Student Services 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 (http://www.zimride.com/ucla), a Facebook application, to find one-time rides or create a carpool with fellow Facebook users. More than 160 vanpools (http://www.zimride.com/ucla/vanpool) 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). The Bruin Commuter Club offers special benefits and incentives to eligible UCLA students who ride public transit, a UCLA vanpool, or carpool with two or more people. Students may also rent a car through Zipcar (http://www.zipcar.com/ucla).

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

Effective as of Fall Quarter 2013, students interested in purchasing parking should access the student parking application at https://www.transportation.ucla.edu/appmain.htm using their UCLA Logon ID to see personalized parking options based on campus data (class standing, housing status, graduate student major, etc.).
Purchasing of parking permits is prioritized according to class standing listed in the student database as follows: graduate students, followed by seniors and juniors, followed by sophomores and first-year students. Within each category, priority is given to students who carpool. Students must be registered for the current term to apply for parking. All commuter students qualify for parking. Students living within ZIP code 90024 must pay the residence hall parking rate. Students living on campus (excluding Regents’ Scholars) must have local, verifiable, current, continuous paid employment, paid internship, or an academic apprenticeship to qualify for parking.

Carpool groups that apply on time are given priority for carpool permits at a discounted rate. All members of the carpool must qualify under the carpool parking requirements at http://mapais.ucla.edu/go/1001193.

Students are encouraged to apply on time and follow all application and payment guidelines to increase their chances of receiving a permit. Permits are not guaranteed. Students who are not offered a parking assignment during a given term must reapply for parking in a subsequent term. Student parking applications, payment deadlines, and related information are available on the student parking permits web page at http://mapais.ucla.edu/go/1000354.

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://mapais.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 more 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—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 68 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 23 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.uclacommunityprograms.org 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 the Center for Art of Performance at UCLA.

**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 weekend-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.wacd.ucla.edu.

**CENTER FOR ART OF PERFORMANCE AT UCLA**

Since 1937, the Center for Art of Performance at UCLA 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. The center presents more than 200 public concerts and events each year, often sponsoring debut performances of new works by major artists. Through the center, the campus hosts a varied and active performance program, ranging from regular concerts by the Los Angeles Chamber Orchestra to events with 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://cap.ucla.edu or call (310) 825-4401.

**SPORTS AND ATHLETICS**

Athletes 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 (109). In 2011-12 the UCLA athletic programs (men and women) placed third 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, Kevin Love, 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 almost 14,000 for UCLA basketball, volleyball, and gymnastics events. It was the site of the 1984 Summer Olympics gymnastics competition. Immediately adjacent, Drake Stadium is the home of UCLA track and field and soccer competitions and site of many outdoor events, including the U.S. Olympic Festival 1991. 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 72 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 each in baseball and 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 37 NCAA titles—second highest in the nation—including 11 in softball, seven in water polo, six in gymnastics, five in track and field, four in volleyball, three in golf, 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, boxing, Brazilian jiu-jitsu, chess/backgammon, cycling, dragon boat, equestrian, fencing, figure skating, flag football, golf, gymnastics, ice hockey, Japanese martial arts, jeet kune do, juggling, kendo, kung fu, men's and women's lacrosse, pool sharks, 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, wrestling, 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, outdoor adventures, 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/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, six lighted tennis courts, sand volleyball court, two multipurpose sports courts, and various meeting rooms and lounges, as well as a challenge course. The UCLA Marina Aquatic Center offers sailing, windsurfing, kayaking, rowing, surfing, and other activities. Students also have the use of Pauley Pavilion, Drake Stadium, 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 9 to 14, Bruins on Water for ages 8 to 10, Camp Adventure for ages 11 to 15, Camp Bruin Kids for ages 5 to
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10, Camp Explore for ages 7 to 10, Camp Voyager for ages 11 to 15, Counselors in Training for ages 13 to 17, Sunset Sleepover for ages 7 to 12, Super 7 for ages 7 to 10, Teen Programs for ages 11 to 15, group and private lessons, and the Summer Family 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.
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.

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://admission.universityofcalifornia.edu/.

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, Henry Samueli School of Engineering and Applied Science, School of the Arts and Architecture, School of Nursing, and School of Theater, Film, and Television are open for Fall Quarter. The application filing period is November 1-30 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 12.5 percent of the state's high school graduates be eligible for admission to the University of California. Requirements are designed to ensure that all eligible students are adequately prepared for University-level work.

Fulfilling the minimum admission requirements does not assure admission to UCLA. Admission is based on demonstrated high scholarship in preparatory work going well beyond the minimum eligibility requirements. High school honors level and Advanced Placement courses are good preparation regardless of the desired major. UCLA offers admission to those students with the best overall academic preparation, viewed in the context of the applicants' academic and personal circumstances, extracurricular and volunteer experiences, and the overall strength of the UCLA applicant pool. For details, see 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, scholarship requirement, and 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, cultures, and geography; and one year of U.S. history or one-half year of U.S. history and one-half year of civics or American government.

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

**C. Mathematics.** Three years of college preparatory mathematics that include the topics covered in elementary and advanced algebra and two- and three-dimensional geometry (four years are recommended, including trigonometry and calculus). Approved integrated mathematics courses taken in the seventh and eighth grades may be used to fulfill this requirement if the high school accepts them as equivalent to its own mathematics courses.

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

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

**F. Visual and Performing Arts.** One year-long approved arts course from a single visual and performing arts discipline: dance, drama/theater, music, or visual art.

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

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<thead>
<tr>
<th>Subject Requirement</th>
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<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>
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<tr>
<td>c. Mathematics</td>
<td>3 years</td>
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<td>d. Laboratory Science</td>
<td>2 years</td>
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<td>e. Language Other than English</td>
<td>2 years</td>
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<tr>
<td>f. Visual and Performing Arts</td>
<td>1 year</td>
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<tr>
<td>g. College Preparatory Electives</td>
<td>1 year</td>
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**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 Tests 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_tr/tradms.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_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 College credit for examinations given by national test agencies. 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 through 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 with no fee, or American Express, Discover, MasterCard, and VISA credit cards with a fee.

ANNUAL UNDERGRADUATE FEES

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

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

The UCEHIP fee is billed each term along with other UCLA fees. UCEHIP 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 UCEHIP and is where all nonemergency medical care must be initiated for UCEHIP claim payment consideration. See http://www.studenthealth.ucla.edu.

Waiving UCEHIP

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

Students must apply for a UCEHIP waiver online. A pre-waiver worksheet is available to assist students before they complete an actual waiver. See the Ashe Center website for details, including a definition of qualified private medical/health insurance. Select the Insurance tab on http://www.studenthealth.ucla.edu. Then choose UCEHIPWaiver from the list and follow the prompts.

Deadlines for Waiving UCEHIP

Third-party individuals may not waive UCEHIP for a student. Waivers must be submitted by the stated deadlines whether or not fees have been paid by that date. The Fall UCEHIP waiver is available between June 1 and the student fee payment deadline. 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 UCEHIP is as follows:
- Fall Quarter: September 1–20
- Winter Quarter: December 1–20
- Spring Quarter: March 1–20

The UCEHIP Fall Quarter waiver website is available between June 1 and September 20, 2013.

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 log in and complete the Hepatitis B questionnaire at http://www.studenthealth.ucla.edu by the beginning of their first term at UCLA.

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. For more information, call (310) 825-7693.

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

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

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

**Enrolling in Classes**

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

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

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 enrollment 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 wait list 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/soc/ursa.htm.

**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, UC Cross-Campus Summer Programs, or Summer Education Abroad Programs and in need of financial aid must submit a summer financial aid application in addition to the Free Application for Federal Student Aid (FAFSA). Summer applications are available at http://www.fao.ucla.edu/summer_aid_info.htm.

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

FREE APPLICATION FOR FEDERAL STUDENT AID

To evaluate financial need, all citizen and permanent resident students who apply for aid must provide financial information on the Free Application for Federal Student Aid (FAFSA). If students are financially independent according to the federal financial aid guidelines, their own financial circumstances are analyzed rather than those of their parents. The University expects that students and their families bear as much of the cost of a student’s education as their circumstances permit.
The FAFSA is used to apply for all federally funded programs, funds administered by UCLA, and Cal Grants administered by the California Student Aid Commission. Loans that are not need based are also available to all students who complete FAFSA. Students should complete the FAFSA at http://www.fafsa.ed.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.

CALIFORNIA DREAM ACT APPLICATION

Students who are not citizens or permanent residents but who are eligible for Assembly Bill 540 nonresident fee waivers may be eligible to qualify for scholarships for the entire 2013-14 academic year and University grant aid if they complete a California Dream Act Application at http://www.csac.ca.gov/dream_act.asp. The priority filing deadline for University grant consideration is March 2.

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.ed.gov. Scholarship applications for continuing students can be submitted at http://www.fao.ucla.edu, are available beginning in January, and should be completed by March 2 for on-time consideration. Continuing undergraduate 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 show academic excellence and promise. Alumni Scholarships are merit based and competitively awarded. Freshman award amounts range from $4,000 to $20,000 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 $20,000. Awards are paid over four years; annual renewals require a combination of 30 hours of service annually to UCLA and the Alumni Association.

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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; or Navy/Marine Corps, (310) 825-9075. Applications for Army scholarships can also be obtained at http://www.goarmy.com/rotc/scholarships.html; for Air Force scholarships at http://www.afrrotc.com/scholarships/high-school/scholarships/; and for Navy scholarships at http://www.nrotc.navy.mil/scholarships.aspx 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), January 10 (Army), or January 31 (Navy/Marine Corps) of the year preceding college matriculation. Two- (not available for Air Force) and three-year scholarship applications are also available and are considered when received.

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

Federal Pell Grants
Federal Pell Grants are based on exceptional need. They are awarded to undergraduate students who are U.S. citizens or eligible noncitizens and who have not earned a bachelor’s degree. Amounts for 2013-14 range from $605 to $5,645 for students enrolled full time. Students who file the FAFSA are automatically considered for a Pell Grant. Eligibility is determined by the federal government. Award amounts depend on a student’s Estimated Family Contribution (EFC) and whether enrollment is full time or below. Awards are reduced for students enrolled less than full time.

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 or California Dream Act Application 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. Award amounts are $12,192 for Cal Grant A and $1,473 for Cal Grant B for full-time students (12 units or more). Awards are reduced for students enrolled less than full time.

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, eligible noncitizens, or noncitizens eligible for AB 540 waivers and who apply on time are considered. University grant eligibility is subject to availability of funding. Grants may be exhausted before the end of the academic year. Awards are reduced for students enrolled less than full time.

University Grants to Purchase UCShiP
These grants are based on need and awarded to on-time FAFSA and California Dream Act applicants to cover the cost of the University of California Student Health Insurance Plan (UCSHIP). Students who waive out of UCHSP are not eligible for these grants.

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 long-term, low-interest loan.

Borrowers must realize their commitment and responsibility to repay according to repayment schedules. Before accepting a loan, students 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; eligibility is subject to availability of funding. The loan limit per academic year is $5,500 for undergraduate students and $8,000 for graduate and professional students. The actual award amount may be less, based on annual funding and UCLA’s institutional awarding policy. The loan interest rate is
5 percent. Loan repayment and interest accrual begin either six or nine months after graduation or dropping below half-time enrollment.

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

**Direct Loans**

Direct Loans are low-interest Subsidized and Unsubsidized Loans financed by the Department of Education. Subsidized Direct Loans are awarded to undergraduate students who have demonstrated financial need. As of publication time, the interest rate is fixed at 6.8 percent for loans disbursed between July 1, 2013, and June 30, 2014. Interest rates are subject to change; contact the Financial Aid Office for additional information. Interest accrues immediately after students graduate or drop below half-time enrollment. Repayment begins six months after students leave school or drop below half-time enrollment.

Unsubsidized Direct Loans are available to undergraduate, graduate, and professional students who are U.S. citizens or eligible noncitizens regardless of income. The interest rate is fixed at 6.8 percent. Interest accrues from the date of disbursement, but students can avoid the extra costs of accrual by making regular interest payments while in school.

**Direct PLUS Loans**

Direct PLUS Loans are designed to help graduate students and parents of undergraduate students meet the total cost of education. Graduate students and parents may be eligible to borrow up to the cost of education for the academic year less any other financial aid received. This loan is available only to borrowers who do not have adverse credit histories. The interest rate is fixed at 7.9 percent. Borrowers may want to consult a tax adviser to see if this interest is tax deductible.

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### Annual Limits

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<th>Subsidized Loans</th>
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<tr>
<td>Graduates (beyond bachelor’s degree)</td>
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**Unsubsidized Loans**

(includes any subsidized funds awarded)

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<td>Sophomores</td>
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<tr>
<td>Juniors/Seniors</td>
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</tr>
<tr>
<td>Graduates (beyond bachelor’s degree)</td>
<td>20,500</td>
</tr>
</tbody>
</table>

**Additional Unsubsidized Funding**

(for independent students and students whose parents are denied PLUS loans)

<table>
<thead>
<tr>
<th>Freshmen</th>
<th>$4,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sophomores</td>
<td>4,000</td>
</tr>
<tr>
<td>Juniors/Seniors</td>
<td>5,000</td>
</tr>
<tr>
<td>Graduates (beyond bachelor’s degree)</td>
<td>12,000</td>
</tr>
</tbody>
</table>

### Private Loans

Private loans are available to students who have received the maximum award amounts under the Direct Loan Program and require additional funding. These loans are sponsored by banks and private lending institutions. Interest rates and repayment schedules vary. These loans must be certified by the Financial Aid Office before funds can be disbursed. A list of private lenders that UCLA borrowers have used in the past is available under Publications at [http://www.fao.ucla.edu/publications.html](http://www.fao.ucla.edu/publications.html).

**Short-Term Loans**

Students need not be receiving financial aid to apply for a short-term loan. They may borrow up to $200 for immediate emergency needs; the amount is repayable on the 20th of the month following the month in which the loan was made. To qualify, applicants must be registered UCLA students with satisfactory loan repayment records. Applications are available from the Student Loan Services Office, A227 Murphy Hall. See [http://www.loans.ucla.edu/shorttermloan.html](http://www.loans.ucla.edu/shorttermloan.html).

**WORK-STUDY PROGRAM**

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

**MAJORS AND DEGREES**

Students may choose from over 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, Henry 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 an undeclared major until the end of their sophomore year. Certain schools require students to choose a major when applying for admission, or require early declaration. Check specific policies for declaration with the school or department adviser.

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

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 Examinations in English OR
2. Scoring 5, 6, or 7 on the International Baccalaurate High Level English A Examination or scoring 6 or 7 on the International Baccalaurate Standard Level English A Examination OR
3. Scoring 720 or higher 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/ehwr/.

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 are 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. Transfer students 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, CM182, M183
   - Economics 183
   - Gender Studies M147B, M147D
   - Geography 136
   - Study of Religion M142C
3. Equivalent courses completed in UCLA Extension or at another college institution, and accepted by the Board of Admissions, may be used to fulfill the requirement OR
4. Presenting a satisfactory result of the requirement, by examination, as administered at another college or university within the state OR
5. Scoring 500 or better on the SAT Subject Test in U.S. History OR
6. Scoring 3, 4, or 5 on the College Board Advanced Placement Test in American History.

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

Students attending the University on an F-1 or J-1 visa may petition for exemption from this requirement by showing proof of temporary residence in the U.S. For more information on this requirement, contact the undergraduate History Department counselor in 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, social sciences, and behavioral sciences (URC North, A334 Murphy Hall,
STUDY

UNDERGRADUATE

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research.htm. see http://www.ugresearchnorth.ucla.edu/student

social sciences, and behavioral sciences students should

for advanced undergraduate work and graduate school.

training and experience, as well as preparation

research, The centers provide

and coordinate the

urfp.htm. Arts, humanities, social sciences, and behavioral sciences students should see http://www.ugresearchnorth.ucla.edu/scholarships.htm.

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.

CAREER CENTER

INTERNATIONAL AND EXPERIENTIAL LEARNING SERVICES

The UCLA Career Center, located in the Strathmore Building, offers advice and leads for internships, fellowships, and other experiential learning opportunities in the U.S. and abroad. Many helpful resources are featured in the Career Center Library Internship Zone and on BruinView™. Options for current students and alumni include teaching or volunteering abroad, research or fieldwork, and internships in almost every occupation or industry. All career counselors and peer advisers offer support for students eager to gain hands-on experience. See http://career.ucla.edu.

WASHINGTON, DC, FELLOWS INTERNSHIP PROGRAM

The Washington, DC, Fellows internship program supports students seeking summer internships in Washington, DC. Assignments are available with elected

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.ugresearchsci.ucla.edu/srpintro.htm. Arts, humanities, social sciences, and behavioral sciences students should see http://www.ugresearchnorth.ucla.edu/studentresearch.htm.

UNDERGRADUATE RESEARCH FELLOWS PROGRAM

The Undergraduate Research Fellows Program (URFP) is available on a competitive basis and by application for undergraduate students seeking entry-level research experience. Funded students typically participate in two terms of research (Winter and Spring Quarters) through SRP. Science, engineering, and mathematics students should see http://www.ugresearchsci.ucla.edu/urfp.htm. Arts, humanities, social sciences, and behavioral sciences students should see http://www.ugresearchnorth.ucla.edu/scholarships.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.ugresearchsci.ucla.edu/ursp.htm. Arts, humanities, social sciences, and behavioral sciences students should see http://www.ugresearchnorth.ucla.edu/scholarships.htm.

310-825-2935, http://www.ugresearchnorth.ucla.edu) and in science, engineering, and mathematics (URC Sciences, 2121 Life Sciences, 310-794-4227, http://www.ugresearchsci.ucla.edu) by supporting scholarly, critical, and creative research. The centers provide mentoring and tutorials, manage the Student Research Program (SRP), and administer summer research programs, academic year research programs, research stipends, and scholarships. They also sponsor three student-run publications—the Undergraduate Science Journal, Aleph humanities and social sciences journal, and Westwind literature 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.
**CAPSTONE MAJORS AND PROGRAMS**

Capstones are designed to be the culmination of a UCLA undergraduate experience. Capstones range from yearlong sequences of courses or tutorials to a single seminar, and from honors theses to comprehensive seminar projects or internships. They may be based in tutorials, laboratories, advanced courses, or seminars and may include either individual or team-based projects.

Four levels of UCLA capstone options are illustrated. The four levels represent different expectations for student engagement and independence, ranging from advanced senior seminars or project courses that require a comprehensive term paper, performance, or product design, to individually designed majors. The percentages listed indicate the expected participation of seniors at each of the four levels. It should be noted that some students might complete capstones at more than one level; for example, a student, having completed an advanced seminar, might decide to engage in an independent study or honors project.

Capstone majors and programs are identified in the Curricula and Courses section of this catalog. See http://www.capstones.ucla.edu for more detailed information.
officials, government agencies, public interest groups, international organizations, the media, and a wide range of public and private organizations. The program offers advice on searching and applying for internships, as well as housing support and the option to apply for alumni-sponsored scholarships. For further information, send an e-mail to dcinterns@career.ucla.edu.

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 UC courses with research and field experience. Students live at the UC Washington Center for up to 12 weeks, dividing their time between coursework and a part-time internship placement. They are 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/.

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://gseis.ucla.edu/academic-programs/education-studies-minor and the program description in the Curricula and Courses section of this catalog.

JOINT MATHEMATICS/EDUCATION PROGRAM

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

MATHEMATICS FOR TEACHING B.S.

The Mathematics for Teaching capstone 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 who complete the major automatically complete the Mathematics Department’s California-approved subject matter program. At the end of their senior year, students may request a letter from the Mathematics Student Services Office, 6356 Math Sciences, verifying their completion of these courses and thus their subject matter competence for the California Single Subject Teaching Credential in Mathematics. See the degree description in the Curricula and Courses section of this catalog.
SCIENCE EDUCATION MINOR

The Science Education minor is designed for students who wish to become middle school and high school science teachers. The minor provides the broad general science background included in California State subject matter credential examinations, selected coursework required for entry into a variety of post-baccalaureate credential programs, and field experiences in the development, management, and teaching of science laboratory instruction in grades 7 through 12, including Advanced Placement Tests. The minor is also attractive to students who plan to teach as graduate students in their disciplines. See https://www.nslc.ucla.edu/cateach/Science_Opportunities/Science_Education_minor.html or call (310) 794-2191.

SCIENCE TEACHER EDUCATION PROGRAM

The Science Teacher Education Program (STEP), cosponsored by the College of Letters and Science and GSE&IS, allows science majors to observe and participate in classrooms in schools in the Los Angeles area and to begin teacher education courses in their senior year. Students earn a preliminary teaching credential the summer after the bachelor's degree is received and a master's in 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 https://www.nslc.ucla.edu/cateach/ or call (310) 794-2191.

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://centerox.gseis.ucla.edu/teacher-education/.

TEACHLA

TeachLA is a University Internship Program associated with GSE&IS. University interns are full-time employees of Los Angeles 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, United Teachers Los Angeles, and UCLA Extension. See http://centerox.gseis.ucla.edu/teacher-education/pathways/teachla.

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 https://www.nslc.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 is an interdisciplinary and interdepartmental series of courses designed to introduce students to key issues and methodologies in the field of arts education for multiple publics and to a broad range of possible careers in the arts, including K-12 teaching, museum education, arts administration, art therapy, and arts advocacy.

The arts education teaching sequence, an important component of the minor, consists of three courses in which selected undergraduate students explore core issues in arts education, creativity, and social justice. Students are assigned to K-12 classrooms in the Los Angeles area where they first observe and then implement an eight-week sequential arts-based lesson plan under the supervision of the guiding teacher. The program office is in 2101 Broad Art Center. See 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 the Astin Civic Engagement Research Scholarship program. 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.uei.ucla.edu/communitylearning.htm.

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. UCCS is open to all juniors and seniors with a 3.0 grade-point average. For more information, send an 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 further information, contact the Office of Instructional Development, 70 Powell Library, (310) 206-8998. See http://www.oid.ucla.edu/students/cutf/.

**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 freshman students to topics of intellectual importance and encourage them to participate in critical discussions with a small group of peers. The program takes its name from the motto of the University of California: *Fiat Lux – Let There be Light!* For details about seminar offerings each term, see the Schedule of Classes at http://www.registrar.ucla.edu/schedule/. For more information about the program, see http://www.uei.ucla.edu/fiatlux.htm.

**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.

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

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.ugeducation.ucla.edu/counseling/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.ugeducation.ucla.edu/counseling/cam.html.

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, http://aap.ucla.edu), built on principles of social justice, has a threefold mission: (1) to ensure the academic success, retention, and graduation of students who have been historically underrepresented in higher education, (2) to increase the numbers of AAP students entering graduate and professional schools, and (3) to develop the academic, political, scientific, economic, and community leadership necessary to transform society. AAP promotes academic achievement and excellence by providing students with an array of academic services. 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. See http://aap.ucla.edu/#/programs/new-students/ or call (310) 206-1571.

ACADEMIC COUNSELING

College counselors at AAP holistically counsel students to facilitate their academic and personal success by empowering them with the knowledge and guidance to thrive in their undergraduate careers and beyond. 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://aap.ucla.edu/#/programs/counseling/ or call (310) 825-1481.

CENTER FOR COMMUNITY COLLEGE PARTNERSHIPS

The Center for Community College Partnerships (CCCP) develops academic partnerships between California community colleges, particularly those with large underrepresented populations, and the University to 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 academic residential summer programs to help prepare students for transfer to a four-year university and to help institutions develop a transfer culture through a critical race theory framework. See http://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 beyond the bachelor’s degree.

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 labor/workplace studies, 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://aap.ucla.edu/#/mentoring/community-development-and-social-justice-program-cdsj/ 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://aap.ucla.edu/#/mentoring/educators-for-tomorrow/ or call (310) 794-4186.

Graduate Mentoring and Research Programs

The Graduate Mentoring and Research Programs offer all AAP students one-on-one mentoring in preparation for graduate studies and professional school admission. The office also offers a variety of workshops on graduate school topics. See http://aap.ucla.edu/#/mentoring/graduate-and-professional-school-resources/ or call (310) 794-4186.

McNair Research Scholars Program

The McNair Research Scholars Program prepares low-income, first-generation, and historically underrepresented undergraduate students for the best graduate programs in the country. The program works with 28 students annually to prepare them for Ph.D. programs in the humanities or social sciences. Students conduct an independent research project and participate in an intensive summer program. See http://aap.ucla.edu/#/mentoring/mcnair-research-scholars-program/ or call (310) 794-4186.

Research Rookies Program

The Research Rookies Program gives 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://aap.ucla.edu/#/mentoring/aap-junior-scholars/ or call (310) 794-4186.

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://aap.ucla.edu/#/programs/counseling/peer-counselors/ or call (310) 825-1481.

PEER LEARNING

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 sessions are held in small groups that foster discussion and allow students to listen to and articulate new and different perspectives. See http://aap.ucla.edu/#/programs/peer-learning/ or call (310) 206-7771.

Scholarships
There are many opportunities for eligible students in AAP to receive need-based scholarship funds. Some awards require application; others are available through nomination. See http://aap.ucla.edu/#/aap-scholarship/ or call (310) 206-1805 for further information.

Summer Programs
AAP’s seven-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 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 an advanced composition course, honors research course, and upper division seminar. Academic counselors are available to assist students in shaping their educational plan toward graduation. See http://aap.ucla.edu/#/programs/new-students/freshman-and-transfer-summer-programs/ or call (310) 206-1571.

Vice Provost Initiative for Precollege Scholars
The Vice Provost Initiative for Precollege Scholars (VIPS) program is a partnership between UCLA and the Los Angeles and Pasadena school districts that prepares historically underrepresented students in 10 high schools to become competitively eligible for admission to UCLA and other flagship universities and to encourage pursuit of graduate and professional education using a social justice framework and holistic approach. VIPS offers peer mentoring, summer programs, Saturday Academies, and research opportunities to scholars and their families. See http://aap.ucla.edu/#/programs/vips/ or call (310) 267-4676.

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

Honor Societies
Alpha Lambda Delta and Phi Eta Sigma
Alpha Lambda Delta and Phi Eta Sigma are national honor societies that recognize high achieving first-year students. Membership is based solely on academic achievement 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 or first year at UCLA, 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 administrators in developing and maintaining high standards of education 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 more information, contact the Office of the Dean of Students, 1206 Murphy Hall, (310) 825-3871. See http://ucla.goldenkey.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 35 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, as is a foreign language course at the intermediate level or above. A Passed grade is computed approximately as a B, depending on number of courses taken and graded units. Students who are elected are notified by mail. For further information, contact Phi Beta Kappa in the Honors Programs Office, A311 Murphy Hall, (310) 825-1615. See http://www.college.ucla.edu/pbk/.

**Tau Sigma**

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

Tau Sigma honors UCLA’s large transfer community for academic achievement and provides leadership, networking, and social activities. For more information, contact the Office of the Dean of Students, 1206 Murphy Hall, (310) 825-3871.
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**

Diversity, Inclusion and Admissions
1237 Murphy Hall
(310) 206-3411
http://grad.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://grad.ucla.edu/gasaa/deptinfo/deptinfointro.asp.

**APPLYING FOR ADMISSION**

Prospective students may apply online at http://grad.ucla.edu.

**WHEN TO APPLY**

Most departments and schools have deadlines in November and early 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 submitted 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 materials to be submitted, including official transcripts of record and the non-refundable application fee, are specified at http://grad.ucla.edu. Submitted materials become the property of the University and 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.

GRE registration and information about both paper and computer-based testing are available at http://
www.ets.org. Information on GRE fee waivers is also available on the ETS website.

**LETTERS OF RECOMMENDATION**

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

**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 and with an English translation certified by the institution, for all college and university work. The original of an academic record that cannot be replaced must not be sent; a properly certified copy should be sent instead. Specific information for applicants from a variety of educational systems is available at http://grad.ucla.edu.

**Proficiency in English**

International students who hold a bachelor's or higher degree from a university in a country where English is both 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. Applicants 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 IELTS results, students may be required to complete one or more courses in the English as a Second Language 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 IELTS, 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 IELTS.

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). Those who hold a bachelor's degree from a U.S. institution are exempt. Students who do not plan to work as teaching assistants do not need to take the TOP.

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

**ABOUT THE UCLA GRADUATE DIVISION**

The UCLA Graduate Division administers policy established by the Academic Senate and its Graduate Council for master's, doctoral, and graduate professional degree programs other than the professional degree programs in law, medicine, and dentistry, and for postdoctoral scholars. It oversees graduate recruitment and admissions (including the recruitment of diverse student body), fellowships, teaching assistantships, graduate student researcher appointments, and other graduate student support, and the maintenance of high quality standards in all UCLA graduate programs. The dean of the Graduate Division also serves as vice provost of Graduate Education.

**GRADUATE COUNCIL.** The Graduate Council is a standing committee of the UCLA Academic Senate. In keeping with the University's commitment to the philosophy of shared governance, the council is responsible for the establishment of policy and standards for graduate education and post-doctoral scholars at UCLA; the approval, review, and monitoring of graduate degree programs; and recommendations regarding fellowships and assistantships.

**GRADUATE ADVISER.** At matriculation, a graduate student usually selects or is assigned a graduate adviser who assists in program planning and completion of degree requirements. Sometimes this role is temporarily assumed by a faculty adviser assigned to the program as a whole. When the student's master's or doctoral committee is established, the chair of the committee assumes the adviser's role.
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/units/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 changing perceptions, interests, and goals without regard to traditional departmental boundaries. The first year of each degree program has a common curriculum and advising structure.

The following Ph.D. programs use UCLA ACCESS to recruit and admit students: Biochemistry and Molecular Biology, Molecular Biology, Molecular, Cell, and Developmental Biology, and Molecular, Cellular, and Integrative Physiology in the College of Letters and Science; Oral Biology in the School of Dentistry; Biological Chemistry, Cellular and Molecular Pathology, Human Genetics, and Molecular and Medical Pharmacology in the Geffen School of Medicine; Molecular Toxicology in the Fielding School of Public Health; and Microbiology, Immunology, and Molecular Genetics in the College of Letters and Science and the Geffen School of Medicine.

Admission

Applicants apply to UCLA ACCESS rather than to an individual department and must have completed an undergraduate major in a life or physical sciences discipline with superior scholastic achievement. Students should have preparation in physics, biology, and chemistry, as well as specialized courses within the major that may include cell biology, neurobiology, immunology, structural or computational biology, microbiology, virology, plant molecular biology, developmental biology, biochemistry, or molecular biology. In certain cases, background deficiencies may be remedied concurrently with graduate studies if recommended by the UCLA ACCESS steering committee. In addition to the UCLA Application for Graduate Admission, students should submit their scores on the Graduate Record Examination (GRE) General Test (Subject Test is optional) and three letters of recommendation from individuals who can provide direct knowledge of their academic record and potential for superior achievement in independent research. Admission is limited to Fall Quarter.

Obtain information from the Program Coordinator, UCLA ACCESS to Programs in Molecular, Cellular, and Integrative Life Sciences, 172 Boyer Hall, UCLA, Box 951570, Los Angeles, CA 90095-1570, (310) 206-6051. See http://www.uclaaccess.ucla.edu.

First-Year Course Requirements

During their first nine months in residence, students rotate for one term each through three laboratories selected from the UCLA ACCESS faculty list. They enroll in a 500-level course for 6 units of credit for each rotation.

In the Fall and Winter Quarters, students take four consecutive five-week courses in biochemistry and molecular biology, genetics, cell biology, and special topics. These courses involve active student participation in small-group, discussion-based courses focused on primary research articles.

Additionally, students are required to take 6 units of elective courses from a list that includes offerings from participating Ph.D. programs. Electives are normally taken in the Spring Quarter. A course in ethics and accountability in biomedical research is also required in the Spring Quarter.

All departments participating in UCLA ACCESS consider teaching experience to be an integral part of the graduate program. Students are required to complete two terms of teaching beginning in their second year. They are also required to complete a course on approaches and methods for successful teaching.

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.

**DUPICATION 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.

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**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 through 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.

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 with no fee, or American Express, Discover, MasterCard, and VISA credit cards with a fee.

**ANNUAL GRADUATE FEES**

Although the exact cost of attending UCLA varies by program, there are some fees that all UCLA students must pay. UCLA does not charge on a per-unit basis. Each entering and readmitted student is required to submit a Statement of Legal Residence to Diversity, Inclusion and 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.

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 UCSHIP fee is billed each term along with other UCLA fees. UCSHIP 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 UCSHIP and is where all nonemergency medical care must be initiated for UCSHIP claim payment consideration. See http://www.studenthealth.ucla.edu.

**Waiving UCSHIP**

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

Students must apply for a UCSHIP waiver online. A pre-waiver worksheet is available to assist students before they complete an actual waiver. See the Ashe Center website for details, including a definition of qualified private medical/health insurance. Select the Insurance tab on http://www.studenthealth.ucla.edu. Then choose UCSHIPWaiver from the list and follow the prompts.

**Deadlines for Waiving UCSHIP**

Third-party individuals may not waive UCSHIP for a student. Waivers must be submitted by the stated deadlines whether or not fees have been paid by that date. The Fall UCSHIP waiver is available between June 1 and the student fee payment deadline. 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 UCSHIP is as follows:

**School of Law Students**

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<thead>
<tr>
<th>Term</th>
<th>Waiver Deadline</th>
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<tbody>
<tr>
<td>Fall Semester</td>
<td>LLM: July 1–August 7</td>
</tr>
<tr>
<td></td>
<td>Year 1: July 1–August 12</td>
</tr>
<tr>
<td></td>
<td>Years 2, 3: July 1–August 19</td>
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<tr>
<td>Spring Semester</td>
<td>December 1-20</td>
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**School of Medicine Students**

<table>
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<tr>
<th>Term</th>
<th>Waiver Deadline</th>
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</thead>
<tbody>
<tr>
<td>Fall Semester</td>
<td>Year 4: June 1–20</td>
</tr>
<tr>
<td></td>
<td>Years 1, 2, 3: July 1–20</td>
</tr>
<tr>
<td>Spring Semester</td>
<td>December 1–20</td>
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</tbody>
</table>

**All Other Students**

<table>
<thead>
<tr>
<th>Term</th>
<th>Waiver Deadline</th>
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</thead>
<tbody>
<tr>
<td>Fall Quarter</td>
<td>September 1–20</td>
</tr>
<tr>
<td>Winter Quarter</td>
<td>December 1–20</td>
</tr>
<tr>
<td>Spring Quarter</td>
<td>March 1–20</td>
</tr>
</tbody>
</table>

The UCSHIP Fall Quarter waiver website is available between June 1 and September 20, 2013. For semester students, the waiver website is available between June 1 and the fee payment deadline.

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 standard term due date. Whether students attend UCLA, take a leave of absence, or withdraw from the Univer-
sity, 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. Students are not eligible to pay the filing fee unless registered the immediately preceding term. For more information, see http://grad.ucla.edu/gasaa/etd/filingfee.htm.

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 wait list 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://grad.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://grad.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. 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 appli-
cants must file the Free Application for Federal Student Aid (FAFSA). The priority filing deadline is March 2. Some awards, such as university grants, are subject to availability of funding. Students who complete the FAFSA by March 2 should also make sure that any additional requested documentation is submitted to the Financial Aid Office as soon as possible.

Students who need financial aid for Summer Sessions must submit a Summer Aid Application in addition to FAFSA. Summer aid 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 UC 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://grad.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.

MASTERS 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://grad.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 Academic Services, 1255 Murphy Hall or at http://grad.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
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 Academic Services, 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.
Students at UCLA are responsible for understanding the policies and regulations established by the Academic Senate. Should any variations exist between explanations in this catalog and regulations in the Manual of the Academic Senate, the manual prevails in all cases.

ACADEMIC TERMS

Undergraduate programs and most graduate programs at UCLA use the quarter system for academic terms, credit units, and registration fees. An academic quarter term is 10 weeks of instruction, and there are 146 days of instruction in an academic year. Class credit is accumulated in quarter units (see below). Registration fees are due each quarter. For details on academic dates and deadlines, see the Schedule of Classes calendar at http://www.registrar.ucla.edu/calendar/. For fees, see the fee charts at http://www.registrar.ucla.edu/fees/. Note: The School of Law and Geffen School of Medicine use the semester system.

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.

LANGUAGE OF INSTRUCTION

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

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.

GRADES

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

UNDERGRADUATE GRADES

The following grades are used to report the quality of undergraduate student work at UCLA:

A+ Extraordinary
A Superior
B Good
C Fair
D Poor
F Fail
P Passed (achievement at grade C level or better)
NP Not Passed
I Incomplete
IP In Progress
DR Deferred Report

The grades A, B, C, and D may be modified by a plus (+) or minus (–) suffix. Grades A, B, C, and P denote satisfactory progress toward the degree, but a D grade must be offset by higher grades in the same term for students to remain in good academic standing. An F grade yields no unit or course credit.

GRADUATE GRADES

The following grades are used to report the quality of graduate student work at UCLA:

A Superior Achievement
B Satisfactorily demonstrated potentiality for professional achievement in field of study
C Passed the course but did not do work indicative of potentiality for professional achievement in field of study
F Fail
S Satisfactory (achievement at grade B level or better)
U Unsatisfactory
I Incomplete
IP In Progress
DR Deferred Report

The grades A, B, and C may be modified by a plus or minus suffix. The grades A, B, and S denote satisfactory progress toward the degree, 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>A+</td>
<td>4.0</td>
</tr>
<tr>
<td>A–</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>U</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>Grade Points</th>
<th>Course Units</th>
<th>Total Grade Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>A–</td>
<td>3.7</td>
<td>4</td>
<td>14.8</td>
</tr>
<tr>
<td>B–</td>
<td>2.7</td>
<td>4</td>
<td>10.8</td>
</tr>
<tr>
<td>C+</td>
<td>2.3</td>
<td>4</td>
<td>9.2</td>
</tr>
<tr>
<td>Total</td>
<td>12</td>
<td></td>
<td>34.8</td>
</tr>
</tbody>
</table>

PASSED/NOT PASSED GRADES

Undergraduate students in good standing who are enrolled in at least 12 units (14 in the Henry Samueli School of Engineering and Applied Science) may take certain courses on a Passed/Not Passed (P/NP) basis. The grade P is assigned for a letter grade of C or better. Units earned this way count toward degree requirements but do not affect the GPA. Students receive neither units nor course credit for 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) completing and submitting a Cancellation of Registration form, available at http://www.registrar.ucla.edu/forms/, or (2) faxing a written notice to (310) 206-4520. Refund is as follows: fees paid by new undergraduate, M.B.A., and Dentistry students are refunded except for the nonrefundable acceptance of admission fee; for new graduate, undergraduate, continuing, and re-entering students, a service fee is deducted from the amount of fees paid.

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

**WITHDRAWAL**

Withdrawing from 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. The UCSHIP fee is nonrefundable.

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 evaluation.
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://grad.ucla.edu/publications.asp.

CONTINUOUS REGISTRATION POLICY

Graduate students must be either registered and enrolled or on an official leave of absence every term until their degrees are awarded. As an exception, certain graduate students may be eligible to pay the filing fee. Failure to register 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 three quarters of official leave of absence.

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

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

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

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

In Absentia Registration

Academic and professional graduate students conducting research outside California related to their degree program may be eligible for in absentia registration. Students registered in absentia pay 15 percent of Tuition and the Student Services Fee, but pay the full amounts of other mandatory fees such as health insurance and nonresident supplemental tuition (if applicable). In absentia registration and fee reductions may be used for a maximum of six quarters or four semesters for academic doctoral students, and up to three quarters or two semesters for master’s and professional graduate students. To register in absentia, complete a Petition for In Absentia Registration at http://grad.ucla.edu/gss/library/abspetition.pdf. The form includes an FAQ with complete details and restrictions.

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 apply for readmission.

Students who have registered at any time as a graduate student at UCLA and are returning after an absence (except a formal leave of absence) must file an Application for Graduate Admission which is available online at http://grad.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 TRANSCRIPT**

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

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

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).

**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 official academic and verification transcripts through URSA. Other students may order transcripts in person at 1113 Murphy Hall, or by using a Transcript Order form, available at http://www.registrar.ucla.edu/forms/. The form should be sent to UCLA Registrar’s Office, Attn: [Academic or Verification] Transcripts, 1105 Murphy Hall, Box 951429, Los Angeles, CA 90095-1429.

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**

Effective September 23, 2013, most academic and verification transcripts are available at no charge after payment of the Document Fee.

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

Transcript requests are not processed for anyone with outstanding obligations to the University. For exact fees, see http://www.registrar.ucla.edu/fees/.

**STUDENT RECORDS**

The Registrar prepares, maintains, and permanently retains a record of each student’s academic work. Student files of pertinent documents are maintained up to five years from the admit term. Students may view their documents at the Registrar’s Office, 1113
Murphy Hall. Advance notice of two to three days is required for viewing.

**UNIVERSITY RECORDS SYSTEM ACCESS**

Through University Records System Access (URSA), UCLA students acquire academic, financial, and personal information from their University academic records. See http://www.ursa.ucla.edu.

**CHANGE OF NAME OR ADDRESS**

Students who wish to change their name on official University records should fill out a UCLA Name Change or Correction form (available online at http://www.registrar.ucla.edu/forms/) and submit it with documentation supporting the name change to the Registrar’s Office, 1113 Murphy Hall. Students on an F or J visa must provide a current passport bearing the exact same name as the new name. All name changes are recorded on the transcript. If students change their address, they should update their address through URSA.

**CLOSURE OF STUDENT RECORDS**

Student records are closed to revisions in enrollment, grading, and academic actions on award of a degree. Students are responsible for requesting review of their record prior to award of their degree. See UCLA Procedure 220.1 Student Grievances Regarding Challenge to Content of Student Records Under the Family Educational Rights and Privacy Act, which may be found at http://www.adminpolicies.ucla.edu/app/Default.aspx?cid=220-1.

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

**DEGREES**

Students must satisfy (1) University requirements, (2) College or school requirements, and (3) department requirements as described in this catalog.

**UNDERGRADUATE DEGREES**

Undergraduate degree requirements are subject to the following degree policies.

**STUDENT RESPONSIBILITY**

It is the responsibility of students to keep informed of and to comply with the rules, regulations, and policies affecting their academic standing. Meeting academic deadlines, monitoring the Study List for accuracy, completing 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 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) or UCLA Degree Audit serves as the degree check. The DPR or UCLA Degree Audit is a computer-generated assessment of all degree requirements and the courses taken to fulfill them. View and print DPRs or UCLA Degree Audits 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 their DPR or UCLA Degree Audit with departmental undergraduate advisers or College counselors, as appropriate.

School of the Arts and Architecture

Degree Progress Reports or UCLA Degree Audits 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 of 2004-05 or earlier should schedule an appointment to see their academic counselor at 6426 Boelter Hall or by calling (310) 825-9580, to review course credit and degree requirements and for program planning. Students following the 2005-06 and later catalogs use a program called DARS at http://www.seasoasa.ucla.edu/undergraduates/DARS. Students should obtain an official degree check at least one term prior to their graduation term. For details, see the school undergraduate degree audit website at http://www.seasoasa.ucla.edu/seniors/degree-candidate-information#degree-audit-process-1.

School of Nursing

The UCLA Degree Audit report is available through URSA for students entering Fall 2012 and later. Students who enrolled prior to Fall 2012 may request their most recent degree check from the prelicensure student services coordinator in 2-147 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.grad.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 under-graduate 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 affect their degree. Degree auditors notify students whose graduation eligibility cannot be verified of any requirements still outstanding and other problems in completing the degree.

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

A Summary of Shortages for the Bachelor's Degree statement is 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 normally 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
ACADEMIC POLICIES

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 six 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://grad.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

David C. Schaberg, Dean of Humanities
Victoria L. Sork, Dean of Life Sciences
Joseph A. Rudnick, Dean of Physical Sciences
Alessandro Duranti, Dean of Social Sciences
Patricia A. Turner, 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 25,545 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, imagi-
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 opportunities 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 multiracial, multi-ethnic, 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://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 minors in Civic Engagement and Disability Studies. See http://www.uci.ucla.edu/communitylearning.htm.

Center for Educational Assessment. The Center for Educational Assessment (CEA) provides information and analysis to support planning, program and policy development, and other decision making about undergraduate education at UCLA. See http://www.oid.ucla.edu/units/cea.

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 programs for participating students. See http://www.tap.ucla.edu.

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, Undergraduate Student Initiated Education Program, and Writing II Program. See http://www.uci.ucla.edu.
Undergraduate Research Centers. Undergraduate Research Centers (URC)—one for students in the arts, humanities, social sciences, and behavioral sciences and one for students in science, engineering, and mathematics—exist as part of a continuing effort by the College to engage undergraduate students in research and creative activities at all levels. 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 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 Examination or International Baccalaureate Examination (transfer) credit may exceed the unit maximum by the amount of that credit.

**SCHOLARSHIP REQUIREMENT**

Students must earn at least a C (2.0) grade-point average in all courses undertaken at UCLA for receipt of the bachelor’s degree. They must also attain a 2.0 GPA in a major and satisfy both the course and scholarship requirements for that major, including preparation for the major.

**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 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 Examinations 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).

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.

College of Letters and Science

Structure of a Degree

<table>
<thead>
<tr>
<th>University Requirements</th>
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<tbody>
<tr>
<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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<tr>
<th>College Requirements</th>
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<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>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>
<th>Department Requirements</th>
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<tr>
<td>1. Preparation for the Major</td>
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<tr>
<td>2. The Major</td>
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</table>
LETTERS AND SCIENCE

completed the Intersegmental General Education Transfer Curriculum (IGETC) will have satisfied the Writing I and Writing II requirements. No transfer student is admitted to the College without completing, with a grade of C or better (C– or a Passed grade is not acceptable), a college-level writing course that the Office of Undergraduate Admissions and Relations with Schools accepts as equivalent to English Composition 3.

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 UCLA 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 Writing I and Writing II requirements. No transfer student is admitted to the College without completing, with a grade of C or better (C– grade is not acceptable), a college-level writing course that the Office of Undergraduate Admissions and Relations with Schools accepts as equivalent to English Composition 3.

Quantitative Reasoning Requirement

The quantitative reasoning requirement may be satisfied by completing one approved UCLA course (see list below) or an equivalent course within the first seven terms of enrollment. The course must be taken for a letter grade, and students must receive a grade of C or better (C– grade is not acceptable).

The requirement may also be satisfied by achieving an SAT Reasoning Test Mathematics Section score of 600 or 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 College 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.

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.

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 (Khosha); 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

American Sign Language (Linguistics) 1, 2, and 3, or 8

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) 1A-1B-1C or 4A-4B-4C

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);
   M115A-M115B-M115C (Azeri)

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 11A-11B

Political Science 6, 6R, Program in Computing 10A, 10B, 10C, Statistics 10, 11, 12, 13, 14.
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 (Asian Languages) 110A (Sanskrit)
Spanish (Spanish and Portuguese) 1, 2, and 3, or 2A and 3A,
or 10 or 11A-11B
Thai (Asian Languages) 1, 2, and 3, or 3R
Turkish Languages (Near Eastern Languages) 101A-101B-
101C (Turkish); 111A-111B-111C (Uzbek); M115A-
M115B-M115C (Azerbaijan)
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 yearlong GE Cluster series (1) fulfill the Writing II requirement, (2) complete 40 percent 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

Philosophical and Linguistic Analysis

The aim of courses in this area is to introduce students to the ways in which humans organize, structure, rationalize, and govern their diverse societies and cultures over time. The courses focus on a particular historical question, societal problem, or topic of political and economic concern in an effort to demonstrate how issues are objectified for study, how data is collected and analyzed, and how new understandings of social phenomena are achieved and evaluated.

Foundations of Scientific Inquiry. Four courses, two from each subgroup. One 5-unit course from each subgroup must include either laboratory/demonstration or Writing II credit. For students entering Fall Quarter 2009 through Spring Quarter 2014, 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

College of Letters and Science General Education Requirements

<table>
<thead>
<tr>
<th>Foundations of the Arts and Humanities</th>
<th>1 Course</th>
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<tbody>
<tr>
<td>Literary and Cultural Analysis</td>
<td>1 Course</td>
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<tr>
<td>Philosophical and Linguistic Analysis</td>
<td>1 Course</td>
</tr>
<tr>
<td>Visual and Performance Arts Analysis</td>
<td>1 Course</td>
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<tr>
<td>and Practice</td>
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<tr>
<td>Total</td>
<td>15 units minimum</td>
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<table>
<thead>
<tr>
<th>Foundations of Society and Culture</th>
<th>1 Course</th>
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<tbody>
<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</td>
<td>15 units minimum</td>
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</table>

<table>
<thead>
<tr>
<th>Foundations of Scientific Inquiry</th>
<th>2 Courses</th>
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<tbody>
<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 Spring Quarter 2014, 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>
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<tr>
<td>Total</td>
<td>18 units minimum (17 min. Fall 2009-Spring 2014)</td>
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</table>

Total GE 10 Courses/48 Units Minimum
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/.

Advanced Placement Examination Credit
Students may not use Advanced Placement (AP) Examination credit to satisfy the College's 10-course foundational area general education requirement. See the AP Chart at http://www.admissions.ucla.edu/Prospect/APCreditLIS.htm. Consult a departmental 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.
Counseling staff members assist students with College counseling. Advisors advise students on progress and confirm online catalog for updates, and consult regularly with courses taken to fulfill them. Students are responsible for documenting degree requirements and degree planning and providing DPRs or UCLA Degree Audits through URSA. Students can also view DPRs or UCLA Degree Audits through URSA.

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) or UCLA Degree Audit is a record of degree requirements and the courses taken to fulfill them. Students are responsible for monitoring their progress toward the degree. They must read and understand the catalog, check the online catalog for updates, and consult regularly with the College and department counselors to confirm they are satisfying all program requirements. Department counselors advise students on progress and completion of the major requirements. College Academic Counseling staff members assist students with College requirements and degree planning and provide DPRs or UCLA Degree Audits on request. Students can also view DPRs or UCLA Degree Audits through URSA.

MINORS AND SPECIALIZATIONS

Students may choose to pursue a minor to complement their major program of study. Minors consist of no fewer than seven courses (28 units) and no more than nine courses (36 units). Some minors also have admission requirements.

The Computing specializations are sequences of supplemental courses that enhance work in a major. For a list of minors and specializations, see the chart at the beginning of this catalog: descriptions are in the Curricula and Courses section.

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, Mathematics 71SL, 72SL, Science Education 1SL, and 10SL.

REDUCED FEE PROGRAMS

While full-time study is expected and required of students, some students may qualify for part-time study due to compelling reasons of occupation, home and family responsibilities, or health. Under this policy, part-time status is defined as 10 units or less per term based on enrolled units at the end of the third week, and is presumed to be of a permanent nature. On approval of part-time status, a reduction of the tuition fee by one half and a reduction of the nonresident supplemental tuition fee by one half are approved.

To be eligible for part-time study, students must provide documentation of occupation, home and family responsibility, or health that prevents them from carrying a full-time study load, as well as documentation of a need for part-time study for a minimum of three consecutive terms. Once approved for part-time study, students must complete two courses of 10 units or less in each of the three consecutive terms. Only under documented extraordinary circumstances is a one-course Study List approved. Documentation must specify that a one-course Study List is warranted.

Students should obtain 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 in or receive credit for more than 10 units during a term must pay the full fees for that term.

DECLARING A MAJOR

Students are expected to select a major by the beginning of their junior year. This may be a program of related upper division courses within a single department (departmental major) or a group of related courses involving a number of departments (interdepartmental major) or, under certain circumstances, a group of courses selected to meet a special need (individual capstone major).

Most entering freshmen are unsure about specific academic goals and request to be admitted to the College as “undeclared.” These students then explore fields of study by taking introductory courses in the physical and life sciences, social sciences, and humanities in search of an area that most excites their interest.

All students with 90 or more units toward a degree are expected to declare a premajor or a major. When they are ready to do so, they obtain approval on a Petition for Declaration of Major from the department or interdepartmental degree committee that governs their intended major.
Letters and Science

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) or UCLA Degree Audit 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 Examinations. Advanced Placement (AP) Examination credit may not be applied toward a degree unless students had less than 36 units of credit at the time of the examination(s). See the 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, C115, 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: Statistics 10, 11, 12, 13, 14 (or former Anthropology M80, Geography M40, Sociology M18, Statistics 10A, or 10F), 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.

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.
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.

For information on the proficiency in English requirements for international graduate students, see http://dgsom.healthsciences.ucla.edu/dgsom /education/.

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 3.897 or better) for summa cum laude, the next five percent (GPA of 3.822 or better) for magna cum laude, and the next 10 percent (GPA of 3.698 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, UCLA Degree Audits, 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://grad.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 GEFFEN SCHOOL OF MEDICINE

A. Eugene Washington, Dean and Vice Chancellor

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12-105 Center for the Health Sciences
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http://dgsom.healthsciences.ucla.edu/dgsom /education/

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.
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, and superb clinical facilities.

**DEGREES**

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.)
- Biostatistics (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 for details on the four-year premedical studies program.

**SPECIAL PROGRAMS**

**PARTNERSHIP PROGRAMS**

Extending medical education to a broader segment of tomorrow’s physicians and researchers, the Geffen School of Medicine admits a select group of students into two innovative partnership programs. In addition to completing the requirements for the M.D. degree, students engage in specialized coursework and/or projects designed to fulfill the mission of each program.

**Charles Drew/UCLA Medical Education Program**

The mission of the Charles Drew (CDU)/UCLA Medical Education Program is to train students to practice medicine with competence and compassion in disadvantaged rural and urban communities. Each year 24 students are admitted to the program. Students spend their first two years at the UCLA campus and complete their last two years of clinical work in specially designated training centers in medically underserved communities and at UCLA and affiliated hospitals. A distinguishing component of the program is the required medical research thesis. See http://www.cdrew.edu/com/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. A commitment to serve and experience in working with diverse medically disadvantaged populations is paramount. The program leads to the M.D. and a master’s degree in areas that complement the mission of the program. Each year the class is comprised of 14 students. Students identify with one of two programs: PRIME UCLA-WESTWOOD or PRIME UCLA-CDU. Following successful completion of the required clinical clerkships, students pursue a one-year master’s degree. See http://www.mstp.healthsciences.ucla.edu/pages/

**ARTICULATED AND CONCURRENT DEGREE PROGRAMS**

**Medical Scientist Training Program**

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 eight 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/.

**M.D./M.B.A., M.D./M.P.H., M.D./M.P.P.**

Concurrent programs with the Anderson Graduate School of Management and Luskin School of Public Affairs and an articulated program with the Fielding School of Public Health allow UCLA medical students to earn both the M.D. and M.B.A., M.D. and M.P.P.,
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, Luskin School of Public Affairs, or Fielding 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

Marcelo M. Suárez-Orozco, Dean

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http://gseis.ucla.edu

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 two credential programs that are accredited by the California Commission on Teacher Credentialing:

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://grad.ucla.edu/gasaa/admissions/admisinfo.html.

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

**DEGREE REQUIREMENTS**

Specific degree requirements vary according to the department and program. Refer to Program Requirements for UCLA Graduate Degrees at http://grad.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/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 (CICCQ) 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, CICCQ conducts basic, applied, and policy-driven research at the local, state, and national levels. CICCQ takes a collaborative approach to the evaluation process, building relationships with community partners to inform research, practice, and professional development. See http://legacy.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. CIE is committed to incorporating perspectives from ethnic communities around the world to sustain the diversity within indigenous cultural heritages and broaden methods of information analysis and conservation. See http://www.cide.ucla.org.

**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. See http://www.cide.ucla.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 examine children’s learning and development from preschool to sixth grade; investigate teaching diverse student populations; encourage exchange of ideas among scholars, practitioners, and policymakers concerned with child development and school reform; and disseminate effective educational approaches and research. See http://www.connect.gseis.ucla.edu.

**CENTER FOR STUDY OF EVALUATION/NATIONAL CENTER FOR RESEARCH ON EVALUATION, STANDARDS, AND STUDENT TESTING**

The Center for Study of Evaluation (CSE)/National Center for Research on Evaluation, Standards, and Student Testing (CREST) is devoted to educational research, development, training, and dissemination. CSE/CREST provides leadership to the field in these areas by creating new methodologies for evaluating educational quality, creating new designs for assessing student learning, promoting the sound use of assessment data, setting the national research agenda, and influencing practice. See http://www.cse.ucla.edu.
Center X provides a unique setting where researchers and practitioners collaborate to design and conduct programs that prepare and support K-12 education professionals committed to social justice, instructional excellence, the integration of research and practice, and caring in low-income urban schools. See http://centerx.gseis.ucla.edu.

Civil Rights Project/Proyecto Derechos Civiles
The Civil Rights Project/Proyecto Derechos Civiles (CRP) is a research center dedicated to creating a new generation of research in social sciences and law on the critical issues of civil rights and equal opportunity for racial and ethnic groups in the U.S. It has commissioned more than 400 studies, published 13 books, been cited in major Supreme Court decisions on affirmative action, and issued numerous reports from authors at universities and research centers across the country. See http://civilrightsproject.ucla.edu.

Higher Education Research Institute
The Higher Education Research Institute (HERI) conducts research, evaluation, information, policy studies, and research training in postsecondary education. HERI’s research program includes the outcomes of postsecondary education, leadership development, institutional transformation, faculty performance, federal and state policy, and educational equity, and houses the Cooperative Institutional Research Program (CIRP), the largest ongoing national study of college students in the U.S. See http://heri.ucla.edu/index.php.

Institute for Democracy, Education, and Access
The Institute for Democracy, Education, and Access (IDEA) seeks to understand and challenge pervasive racial and social class inequalities in education. In addition to conducting research and policy analysis, IDEA supports educators, public officials, advocates, community activists, and young people as they design, conduct, and use research to make high-quality public schools and successful college participation routine occurrences in all communities. IDEA also studies how research combines with strategic communications and public engagement to promote widespread participation in civic life. See http://www.idea.gseis.ucla.edu.

Institute for Immigrant Children and Youth
The Institute for Immigrant Children and Youth (ICY) is devoted to the scholarly study of immigration with a focus on families, children, adolescents, and emerging adults. Through research, publications, and media outreach, in collaboration with colleagues across UCLA and other major national and international immigration research centers, the institute endeavors to enhance the scholarly understanding of one of the most pervasive and complex issues of our time. See http://icy.gseis.ucla.edu.

Paulo Freire Institute
The Paulo Freire Institute (PFI) seeks to gather scholars and critics of Freire’s pedagogy in permanent dialog to foster the advancement of new pedagogical theories and concrete interventions in the real world. PFI brings together research, teaching, and technology while concentrating on five major areas: studies of globalization and education, teacher education, a comparative perspective on Latin American education, the politics of education, and Paulo Freire’s political philosophy and critical pedagogy. See http://www.paulofreireinstitute.org.

Sudikoff Family Institute for Education and New Media
The Sudikoff Family Institute for Education and New Media utilizes the popular press and other media to disseminate the work of GSE&IS scholars to policymakers, educators, and the general public. Sudikoff Fellows are selected each year from GSE&IS faculty members to enhance awareness of critical issues related to education and information studies by contributing to a variety of media that reach a lay audience, or serve the public interest in some manner. 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. UC ACCORD leverages the research capacity of the UC system to influence policy and practice to produce more positive educational outcomes for low-income and underrepresented students. See http://ucaccord.gseis.ucla.edu.

Henry Samueli School of Engineering and Applied Science
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http://www.engineer.ucla.edu

The UCLA Henry Samueli School of Engineering and Applied Science (HSSEAS), founded in 1945, is committed to creating a better future for Los Angeles, California, the nation, and the world. 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. As part of a great public University, the school is committed to a core mission of teaching, research, and service.

UCLA Engineering supports dynamic programs in traditional and new areas of study and research, including bioengineering and biotechnology, embedded networked sensing systems, information technology
including wireless communications and computing, signal processing, sensor technologies, 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. Opportunities exist for students to gain exposure to entrepreneurship and commercialization of technologies. Students are committed to a high standard of achievement and contribute to the overall excellence in engineering at UCLA.

DEPARTMENTS AND PROGRAMS

The Henry Samueli School of Engineering and Applied Science has seven departments offering study in aerospace engineering, bioengineering, chemical engineering, civil engineering, computer science, computer science and engineering, electrical engineering, manufacturing engineering (M.S. only), materials engineering, and mechanical engineering. Undergraduate programs in aerospace engineering, chemical engineering, civil engineering, computer science and engineering, electrical engineering, engineering, materials engineering, and mechanical engineering are accredited by the Engineering Accreditation Commission of ABET (see http://www.abet.org). The computer science and computer science and engineering programs are accredited by the Computing Accreditation Commission of ABET (see http://www.abet.org).

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

DEGREES

The school offers the following degrees, in addition to undergraduate minors in Bioinformatics and Environmental Engineering:

- Aerospace Engineering (B.S., M.S., Ph.D.)
- Bioengineering (B.S., 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.Eng., online M.S., Engrr.)
- 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 apply directly to HSSEAS by selecting one of the majors within the school or the undeclared engineering option. In the selection process many elements are considered, including grades, test scores, and academic preparation.

Applicants are accepted at either the freshman or junior level.

ADMISSION AS A FRESHMAN

Freshman applicants must satisfy the examination requirement described in the Undergraduate Study 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.

Freshman applicants must meet the University subject, scholarship, and examination requirements described at http://www.admissions.ucla.edu.

Credit for Advanced Placement Examinations. Students may fulfill part of the school requirements with credit allowed at the time of admission for College Board Advanced Placement (AP) Examinations with scores of 3, 4, or 5. Students with AP Examination credit may exceed the 213-unit maximum by the amount of this credit. AP Examination credit for freshmen entering in Fall Quarter 2013 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 Examination credit.

ADMISSION AS A JUNIOR

Students who begin their college work at a California community college are expected to remain at the community college to complete the lower division requirements in chemistry, computer programming, English composition, mathematics, physics, and the recommended engineering courses before transferring to UCLA. Transfer students who have completed the recommended lower division program in engineering at California community colleges normally can complete the remaining requirements for one of the 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 Bioengineering and Chemical Engineering curricula also require 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 in C++, preferably one 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) 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 Examinations 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).

**Engineering Writing.** The engineering writing requirement is satisfied by selecting one approved engineering writing (EW) course from the HSSEAS writing course list or by selecting one approved Writing II (W) course. The course must be completed with a grade of C or better (C– or a Passed grade is not acceptable). Writing courses are listed in the Schedule of Classes at http://www.registrar.ucla.edu/soc/writing.htm.

Writing courses also approved for general education credit may be applied toward the relevant general education foundational area.

**Technical Breadth Requirement**

The technical breadth requirement consists of a set of three courses providing sufficient breadth outside the student’s core program. A list of HSSEAS Faculty Executive Committee-approved technical breadth requirement courses is available in the Office of Academic and Student Affairs, 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 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.
consequently, courses are frequently added to the list.

For the most current list of approved courses, see http://www.registrar.ucla.edu/undergraduates/ge-home-page.

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 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.

Foundations of Society and Culture. Two 5-unit courses, one from each subgroup:

- Historical Analysis
- Social Analysis

The aim of courses in this area is to introduce students to the ways in which humans organize, structure, rationalize, and govern their diverse societies and cultures over time. The courses focus on a particular historical question, societal problem, or topic of political and economic concern in an effort to demonstrate how issues are objectified for study, how data is collected and analyzed, and how new understandings of social phenomena are achieved and evaluated.

Foundations of Scientific Inquiry. One course (4 units minimum) from the Life Sciences subgroup or one course from Bioengineering CM145/Chemical Engineering CM145, Chemistry and Biochemistry 153A, or Civil and Environmental Engineering M166/Environmental Health Sciences M166:

- Life Sciences

This requirement is automatically satisfied for Bioengineering 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.seas.oasa.ucla.edu/undergraduates/ge-home-page.

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

Henry Samueli School of Engineering and Applied Science General Education Requirements

Foundations of the Arts and Humanities
- Literary and Cultural Analysis
- Philosophical and Linguistic Analysis
- Visual and Performance Arts Analysis
- and Practice: 2 Courses Each course must be from a different subgroup. Total = 10 units minimum

Foundations of Society and Culture
- Historical Analysis: 1 Course
- Social Analysis: 1 Course
Total = 10 units minimum

Foundations of Scientific Inquiry
- Life Sciences: 1 Course
Total = 4 units minimum

Total GE: 5 Courses/24 Units Minimum

Engineering writing requirement courses also approved for GE credit may be applied toward the relevant GE foundational areas.
MINIMUM PROGRESS

Full-time HSSEAS undergraduate students must complete a minimum of 36 units in three consecutive terms in which they are registered.

CREDIT LIMITATIONS

The following credit limitations apply to all undergraduate students enrolled in the school:

Advanced Placement Examinations. Some portions of Advanced Placement (AP) Examination credit are evaluated by corresponding UCLA course number. If students take the equivalent UCLA course, a deduction of UCLA unit credit is made prior to graduation. See the HSSEAS AP 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.

MINORS AND DOUBLE MAJORS

HSSEAS students in good academic standing may be permitted a minor or double major. The minor or second major must be outside the school (e.g., Electrical Engineering major and Economics major). HSSEAS students are not permitted to double major with two school majors (e.g., Chemical Engineering and Civil Engineering). Students may file an Undergraduate Request to Double Major or Add Minor form at the Office of Academic and Student Affairs. The school determines final approval of a minor or double major request; review is done on a case by case basis, and filing the request does NOT guarantee approval.

While HSSEAS considers minor or double major requests, specializations are not considered at this time. Students interested in a minor or double major should meet with their counselor in 6426 Boelter Hall.

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

Students admitted to UCLA in Fall Quarter 2012 and thereafter use UCLA's Degree Audit System which can be accessed via URS: OnLine at http://www.ursa.ucla.edu. Students should contact their academic counselor in 6426 Boelter Hall with any questions.

Students following the 2005-06 through 2011-12 catalog years use the program called Degree Audit Reporting System (DARS) and should contact their academic counselor in 6426 Boelter Hall with any questions. 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 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 3.861 or better) for summa cum laude, the next five percent (GPA of 3.760 or better) for magna cum laude, and the next 10 percent (GPA of 3.605 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 3.861 grade-point average for summa cum laude, a 3.760 for magna cum laude, and a 3.605 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 21 percent of the undergraduate and 20 percent of the 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/swel/.

CONTINUING EDUCATION
Continuing education in engineering is developed and administered by the UCLA Extension (UNEX) Department of Engineering and Technology 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 Ave) 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 https://www.uclaextension.edu/eistm/Pages/default.aspx.

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.uasa.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://grad.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
For information on the comprehensive examination plan for each department, see Program Requirements for UCLA Graduate Degrees at http://grad.ucla.edu/gasaa/library/pgmrqintro.htm.

Concurrent Degree Program
A concurrent degree program between HSSEAS and the Anderson Graduate School of Management allows students to earn two master's degrees simultaneously: the 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.

Bioengineering Department. Biomedical instrumentation; biomedical signal and image processing; biosystems science and engineering; medical imaging informatics; molecular cellular tissue therapeutics; neuroengineering

Chemical and Biomolecular Engineering Department. Chemical engineering

Civil and Environmental Engineering Department. Civil engineering materials, environmental engineering, geotechnical engineering, hydrology and water resources engineering, structures (structural mechanics and 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
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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.

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 dual Global Executive M.B.A. degrees with the National University of Singapore (NUS) Business School and with the Universidad Adolfo Ibanez (UAI) in Santiago, Chile, that prepare 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 graduate courses in management. Enrollment in these courses, although open to all University students who have completed the requirements, is limited. The school limits the number of courses taken by undergraduate students to 11.

DEGREES AND PROGRAMS
The school offers the following degrees, in addition to an undergraduate minor in Accounting:
Master of Business Administration (M.B.A.)
Executive Master of Business Administration (EMBA)
Fully Employed Master of Business Administration (FEMBA)
Global EMBA for the Americas (dual degree program with Universidad Adolfo Ibanez in Chile)
Global EMBA for Asia Pacific (dual degree program with National University of Singapore)
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.
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.
Office of Executive Education

Lifelong learning plays a critical role in the success of today's business leaders. The Anderson School’s Office of Executive Education 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/executive-education.

RESEARCH CENTERS

Six interdisciplinary research centers provide valuable resources that support school programs: Center for Global Management (CGM)/Center for International Business Education and Research (CIBER), Center for Management of Enterprise in Media, Entertainment, and Sports (MEMES), Harold and Pauline Price Center for Entrepreneurial Studies, Laurence D. and Lori W. Fink Center for Finance and Investments, Richard S. Ziman Center for Real Estate, and the UCLA Anderson Forecast. See http://www.anderson.ucla.edu/centers for further details.

OUTREACH PROGRAMS

A wide range of outreach programs, such as the Applied Management Research Program, Global Access Program, Johnson and Johnson Programs, Management Development Institute, and Riordan Programs, offer many teaching, research, and service resources to UCLA, the city, and beyond. See http://www.anderson.ucla.edu/programs-and-outreach.

JONATHAN AND KARIN FIELDING SCHOOL OF PUBLIC HEALTH

Jody Heymann, Dean

UCLA 16-035 Center for the Health Sciences Box 951772 Los Angeles, CA 90095-1772 (310) 825-5524 e-mail: info@ph.ucla.edu http://ph.ucla.edu

This is an exciting time to study public health. The field is experiencing an unprecedented level of attention as the nation continues to better prepare itself for a variety of threats to its health and security. As a result, many new and exciting opportunities exist for students, faculty members, and graduates.

The field of public health strives to create healthier communities. Where medicine treats the individual, public health looks to the larger community. Those working in public health focus on efforts to assess the health of people and their environments and develop policies and programs to protect people and help them lead healthier lives.

To achieve these goals, public health crosses many of the traditional academic disciplinary boundaries, drawing from medicine, law, public policy, economics, and biology to name a few. Making water safe to drink and air safe to breathe, controlling toxic waste, halting the spread of infectious disease, promoting the advantages of healthy lifestyles, and minimizing violence in our communities are all examples of public health in action. Increasingly public health is called on to help determine which clinical approaches to an individual health problem are best (outcomes research), and to assess and identify disparities in access to healthcare, quality of healthcare, and health status.

The UCLA Jonathan and Karin Fielding 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.

Students can look forward to working with acclaimed public health experts and innovators. Among its 200 faculty members are 16 members of the prestigious Institute of Medicine, three past presidents of the American Public Health Association, and two past presidents of the International Epidemiological Association.

The school's 650 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 offers graduate programs leading to both academic and professional degrees in five departments. The Department of Biostatistics develops statistical and analytical techniques for public health use. The Department of Community Health Sciences addresses behaviors that prevent disease and enhance health, health problems of high-risk groups (women, children, the aged, the poor, the disadvantaged, and racial and ethnic minorities), health education and promotion, public health policy, community nutrition, and international health. The Department of Environmental Health Sciences elucidates health hazards in the general environment and in the workplace. The Department of Epidemiology is concerned with the nature, extent, and distribution of disease and health in populations. The Department of Health Policy and Management deals with the organization, financing, delivery, quality, and distribution of healthcare services. The school also administers an interdepartmental degree program in molecular toxicology.

See the Curricula and Courses 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.)
- Community Health Sciences (M.P.H., M.S., Ph.D.)
- Environmental Health Sciences (M.S., Ph.D.)
- Epidemiology (M.S., Ph.D.)
- Health Policy and Management (EMPH, M.S., Ph.D.)
- Molecular Toxicology (Ph.D.)
- Preventive Medicine and Public Health (M.S.)
- Public Health (M.P.H., Dr.P.H.)

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://grad.ucla.edu/gasaa/admissions/admisinfo.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://ph.ucla.edu/content/student-affairs/prospective-students/application-checklist/application-checklist-and.

DEGREE REQUIREMENTS

Specific degree requirements vary according to the department and program. Refer to Program Requirements for UCLA Graduate Degrees at http://grad.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 Fielding School of Public Health.

BIXBY CENTER ON POPULATION AND REPRODUCTIVE HEALTH

The Bixby Center on Population and Reproductive Health was established in 2001 at the Fielding School of Public Health as the result of a generous gift from the Fred H. Bixby Foundation. The center has grown since then with the support of several additional Bixby Foundation gifts and promotes and supports research, training, and applied public health in the areas of population, reproductive health, and family planning. The principal focus is on reproductive health issues in developing countries, where population growth rates remain high and reproductive health services are poor or inaccessible. The center also works in reproductive health-related issues in the U.S. See http://bixby.ucla.edu/index.asp.

CENTER FOR CANCER PREVENTION AND CONTROL RESEARCH

The Center for Cancer Prevention and Control Research (http://ph.ucla.edu/content/center-cancer-prevention-and-control-research) is a joint program of the Fielding School of Public Health and the Geffen School of Medicine’s Jonsson Comprehensive Cancer Center. Since its inception in 1976, the center has been recognized throughout the Los Angeles community, nationally, and internationally. It conducts rigorous peer-reviewed research in two major program areas—the Healthy and At-Risk Populations Program (http://www.cancer.ucla.edu/Index.aspx?page=1194) and the Patients and Survivors Program (http://www.cancer.ucla.edu/Index.aspx?page=1195).

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.
The Center for Environmental Genomics was established in 2003 in partnership with the Jonsson Comprehensive Cancer Center. The goal of the center is to bring together experts from a variety of fields, including cancer, environmental health, epidemiology, biostatistics, human genetics, pathology, and pharmacology, to investigate the molecular mechanisms by which environmental agents such as air pollutants and radiation interact with genetic predisposing factors to cause disease. A better understanding of these processes paves the way not only for targeted drug therapies, but also for targeted public health efforts to reduce environmental exposures in high-risk populations. Environmental genomics helps prevent diseases rather than waiting to cure them once they have occurred.

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://ph.ucla.edu/content/academics/degrees/global-health/ucla-center-global-and-immigrant-health.

Infectious diseases are a significant cause of death worldwide and a cause of concern in the U.S. One of the greatest challenges in public health and medicine is to understand the environmental and genetic factors that contribute to the emergence and re-emergence of infectious diseases and to develop the tools that will enable detecting and monitoring of how diseases spread, so that they can be identified and controlled before they become pandemics.

Driven by its core public health mission, the Center for Global Infectious Diseases is an intellectual collection of individuals who provide a home for sustaining and expanding research evaluating how infectious diseases evolve and how their spread can be forecast and in turn mitigated or prevented. The center will bring together in addition to those involved in infectious disease epidemiology and control from within public health an interdisciplinary group of faculty members from across the campus, including those who study microbiology, virology, immunology, molecular genetics, ecology, and the evolution of infectious diseases. See http://ph.ucla.edu/content:center-global-infectious-diseases.

The Center for Health Advancement provides enhanced analysis and evidence-based information to help policymakers decide which policies and programs can best improve health and reduce health disparities. The center analyzes a wide range of timely health improvement opportunities, identifying those supported by strong evidence. It presents and disseminates the results of these analyses in plain language to those who make and influence public and private sector policies and programs and provides training and technical assistance to facilitate implementation of recommended approaches.

The UCLA Center for Health Policy Research was established in 1994 to apply the expertise of UCLA faculty members and researchers to meet national, state, and local community needs for health policy-related research and information and to accomplish three missions: (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 Fielding 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.

The Center for Healthier Children, Families, and Communities (CHCFC) was established at UCLA in 1995 to address some of the most challenging health and social problems facing children and families. The center’s mission is to improve society’s ability to provide children with the best opportunities for health, well-being, and the chance to assume productive roles within families and communities.

Through a unique interdisciplinary partnership between UCLA departments, schools, and affiliated institutions, including the Schools of Public Health, Medicine, Nursing, Education, Law, and Public Affairs and the Department of Psychology, as well as providers, community agencies, and affiliated institutions, a critical mass of expertise has been assembled to conduct activities in five major areas: (1) child health and social services, (2) applied research, (3) training of health and social service providers, (4) public policy research and analysis, and (5) technical assistance and support to community providers, agencies, and policymakers. See http://www.healthychild.ucla.edu.
CENTER FOR HUMAN NUTRITION

Established in 1996, the Center for Human Nutrition is a joint endeavor of the Fielding School of Public Health and the Geffen School of Medicine. Participating faculty members have their academic appointments in either or both schools. The center brings together faculty members, postdoctoral research fellows, graduate students, and medical students to focus on the roles of nutrition and food in human health and disease and is closely affiliated with the UCLA Clinical Nutrition Research Unit, that focuses on nutrition and cancer prevention.

Programs include basic biological research; nutrition education for various constituencies, including medical, graduate, undergraduate, and postgraduate students; participation in multicenter clinical trials for primary and secondary disease prevention through dietary intervention; and public health and international nutrition. The public health and international aspects of the programs include focus on nutrition surveillance of populations, nutritional status and food supply in developing and transitional countries, and nutrition and food policy. See http://cellinteractive.com/ucla/.

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 and 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 Fielding School of Public Health include environmental chemistry, occupational/environmental epidemiology, occupational/environmental medicine, occupational ergonomics, occupational hygiene, toxicology, gene-environment interactions, psychosocial factors in the work environment, occupational health education, and pollution prevention. See http://ehs.ph.ucla.edu/coeh.

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.

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.

UCLA/RAND PREVENTION RESEARCH CENTER

The UCLA/RAND Prevention Research Center conducts studies and develops programs to improve the health and well-being of adolescents, with special
emphasis on projects that involve parents of adolescents. The center is a partnership of the Fielding School of Public Health, Department of Pediatrics, RAND (a nonpartisan, private, nonprofit research institute that conducts research to improve public policy), and local communities.

The center’s multidisciplinary faculty and staff members represent the fields of public health, medicine, social and clinical psychology, sociology, economics, political science, anthropology, education, sampling, statistics, and survey design. It is innovative in its approach to 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/.

WORLD POLICY ANALYSIS CENTER

The World Policy Analysis Center aims to improve the quantity and quality of comparative data available to policymakers, citizens, civil society, and researchers around the world on policies affecting human health, development, well-being, and equity. To date, the research team has gathered detailed information on public policies in all UN member states, including labor laws, poverty reduction policies, education policies, and constitutional rights, with the goals of increasing access to this data and translating research findings into policies and programs at the global, national, and local levels. The center is committed to enhancing global health and public policy research and policy capacity across universities, governments, and international organizations. See http://world.ph.ucla.edu.

MEYER AND RENEE 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
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http://luskin.ucla.edu

Founded in 1994, the UCLA Meyer and Renee Luskin School of Public Affairs incorporates best practices in scholarship, research, and teaching in the fields of policymaking, social work, and urban and regional planning. The unique intersection of these disciplines within one school allows for academic cross-collaboration and a graduate education that values perspectives at both the macroorganizational and microorganizational levels. Graduates of the master’s and doctoral degree programs are well prepared to take leadership roles and effect change as practitioners, researchers, and policymakers in the public, private, and nongovernmental sectors. Faculty members are actively engaged in research that addresses pressing national and regional issues, including immigration, drug policy, prison reform, healthcare financing, transportation and the environment, national security, economic development, and an aging U.S. and world population.

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 Gerontology, Public Affairs, and 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 13 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./Medicine M.D.
- 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./Architecture M.Arch. I
- 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://luskin.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
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 Degree at http://grad.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://civilsociety.ucla.edu.

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://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://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 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://innovation.luskin.ucla.edu.

SCHOOL OF THE ARTS AND ARCHITECTURE
Christopher Waterman, Dean
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http://www.arts.ucla.edu

The School of the Arts and Architecture at UCLA plays a vital role in the cultural and artistic life of the campus and community. Courses and degree programs in 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.
Under the School of the Arts and Architecture umbrella are two minor programs. The Music Industry minor introduces ethnomusicology, music, and music history students to critical perspectives on the formative effects the music industry and music technology have on musical practices around the world. The Visual and Performing Arts Education minor is designed to introduce arts students to the key issues and methodologies in the field of arts education.

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 the Center for Art of Performance at UCLA, one of the largest and most diverse performing arts presenters in the nation, and two world-class museums—the UCLA Hammer Museum which focuses on contemporary and emerging artists and the Fowler Museum at UCLA which focuses on the traditional and contemporary arts of Africa, the Americas, Asia, and Oceania.

The school also includes seven interdisciplinary research centers—the Art|Global Health Center, Art|Sci Center, cityLab, Experiential Technologies Center, Grunwald Center for the Graphic Arts, and NOW Institute—and the renowned Murphy Sculpture Garden. All of these programs offer students the opportunity to broaden and deepen their experience of the arts and architecture while at UCLA.

In addition to providing a rich and diverse environment on campus, the school offers students the opportunity 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 provides 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 performance and context of music-making from a global perspective, 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 innovative curricula focused on the interdisciplinary and intercultural investigation of performance, the arts, and dance, and on establishing connections between cultural theory and artistic practice.

Information regarding academic programs is available from the Office of Enrollment Management and Outreach, 8260 Broad Art Center, UCLA, Box 951427, Los Angeles, CA 90095-1427, http://www.arts.ucla.edu, (310) 825-8981.

Students interested in obtaining instruction 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 interdisciplinary minors in Music Industry and 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 (B.A., 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 undergraduate application, departments in the School of the Arts and Architecture require auditions, portfolios, or evidence of creativity. Information regarding departmental requirements is available on each department website; see http://www.arts.ucla.edu (click on Departments). 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

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 Examinations 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.

**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 40 percent of their general education requirements. Students who do not complete the yearlong GE Cluster series must meet with a counselor in the Student Services Office to determine applicable GE credit.

Courses listed in more than one category can fulfill GE requirements in only one of the cross-listed categories.

**Foundations of the Arts and Humanities.** Three 5-unit courses, one from each subgroup. Courses required to satisfy the major or other courses taken in the major field may not be used to satisfy this GE requirement:

- Literary and Cultural Analysis
- Philosophical and Linguistic Analysis
- Visual and Performance Arts Analysis and Practice

The aim of the 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 the 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.

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**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 electives and can be used to meet the minimum unit requirement for graduation.
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/](http://www.registrar.ucla.edu/ge/).

**Reciprocity with Other UC Campuses**

Students who transfer to UCLA from other UC campuses and have met all GE requirements prior to enrolling at UCLA are not required to complete the School of the Arts and Architecture GE requirements. Written verification from the dean at the other UC campus is required. Verification letters should be sent to the 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.

Students must complete their major with a scholarship average of at least a 2.0 (C) in all courses in order to remain in the major. Each course in the major department must be taken for a letter grade.

As changes in major requirements occur, students are expected to satisfy the new requirements insofar as possible. Hardship cases should be discussed with the department adviser, and petitions for adjustment should be submitted to the dean of the school when necessary.

Any department offering a major in the School of the Arts and Architecture may require a general final examination.

**Individual Majors.** Highly motivated students who believe that no single major accommodates their specific interests and goals may propose designing their own major. Proposals are prepared with faculty guidance and sponsorship and must explain the intent concerning the anticipated program of study and reasons why the academic goals cannot be achieved within an existing major. Proposals must be submitted no later than the end of the sophomore year. Transfer students must complete at least one term of residency at UCLA before proposing an individual major. Students interested in designing an individual major...
should consult the Director of Student Services, School of the Arts and Architecture, 2200 Broad Art Center, (310) 206-3564.

Minors and Double Majors. Students may petition to be reviewed for a minor and/or double major on an individual basis. It is strongly recommended that students pursuing a minor or double major enroll in 15 to 20 units per term. Contact the Student Services Office for an outline of criteria required.

POLICIES AND REGULATIONS

Degree requirements are subject to policies and regulations, including the following:

STUDENT RESPONSIBILITY

Students should take advantage of academic support resources, but they are ultimately responsible for keeping informed of and complying with the rules, regulations, and policies affecting their academic standing.

STUDY LIST

Each term the student Study List must include from 12 to 20 units. The school has no provision for part-time enrollment. After the first term, students may petition to carry more than 20 units if they have an overall grade-point average of 3.0 (B) or better and have attained at least a B average in the preceding term with all courses passed. Consult the Student Services Office no later than the end of the second week of instruction.

MINIMUM PROGRESS

Students are expected to complete satisfactorily at least 36 units during any three consecutive terms in residence; they are placed on probation if they fail to pass these units. They are subject to dismissal if they fail to pass at least 32 units in three consecutive regular terms in residence.

CHANGING A MAJOR

Students in good academic standing who wish to change their major may petition to do so provided they can complete the new major within the 216-unit limit. Petitions must be submitted to and approved by the department or committee in charge of the new major. Admission to certain majors may be closed or restricted; changes are normally not permitted if students are on probation or have begun their last term.

CONCURRENT ENROLLMENT

Enrollment at a non-UC institution or at UCLA Extension while enrolled at UCLA is not permitted.

CREDIT LIMITATIONS

The following credit limitations apply to all undergraduate students enrolled in the school:

Advanced Placement Examinations. Credit earned through the College Board Advanced Placement (AP) Examinations may be applied toward certain University/school requirements. Consult a counselor in the Student Services Office to determine applicable credit. Portions of AP Examination credit may be evaluated by corresponding UCLA course numbers (e.g., French

4). If students take the equivalent UCLA course, unit credit for such duplication is deducted before graduation. See the AP Chart at http://www.admissions.ucla.edu/Prospect/APCreditAA.htm for UCLA course equivalents and credit allowed for GE requirements.

Graduate Courses. Undergraduate students who wish to take courses numbered in the 200 series for credit toward 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, School of the Arts and Architecture, 2200 Broad Art Center, (310) 206-3564.

HONORS

School of the Arts and Architecture undergraduate students who achieve scholastic distinction may qualify for the following honors and programs:

DEAN’S HONORS

To receive Dean’s Honors in the School of the Arts and Architecture, students must have at least 12 graded units per term with a grade-point average of 3.8 for less than 16 units of work (3.7 GPA for 16 or more units). The honor is posted on the transcript for the appropriate term. Students are not eligible for Dean’s Honors in any given term if they receive an Incomplete or a Not Passed (NP) grade, change a grade, or repeat a course.

LATIN HONORS

Latin Honors are awarded at graduation to students with superior grade-point averages. To be eligible, students must have completed 90 or more units for a letter grade at the University of California. The levels of honors and the requirements for each level are summa cum laude, an overall average of 3.935; magna cum laude, 3.886; cum laude, 3.811. 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 and the requirements in preparation for the major. Students must also have at least one term of coursework remaining at UCLA. To obtain both the bachelor's and master's degrees students must be provisionally admitted to the Graduate Division, fulfill requirements for each program, and maintain a minimum B average. No course may be used to fulfill requirements for both degrees. Interested students
should consult their department well in advance of application dates for graduate admission. Contact the Student Services Office in 2200 Broad Art Center for details.

GRADUATE STUDY

The advanced degree programs offered in the School of the Arts and Architecture provide graduate students with unique research opportunities when combined with special resources, such as the Young Research Library, the special collections of the Arts and Music Libraries, and the University's exhibition and performance halls. Fellowships, grants, and assistantships are available through the departments and the dean of the Graduate Division.

ADMISSION

In addition to requiring that applicants hold a bachelor's degree from an accredited U.S. institution or an equivalent degree of professional title from an international institution, each department in the school has limitations and additional requirements. In general, samples of creative work (auditions, portfolios, computer programs, etc.) are required. Detailed information is available on individual department websites and in Program Requirements for UCLA Graduate Degrees at http://grad.ucla.edu/gasasa/library/pgmrtqintro.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://grad.ucla.edu/gasasa/library/pgmrtqintro.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 and research activities, which prepare students for professional careers dedicated to patient treatment and service. 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.

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://grad.ucla.edu/gasasa/library/pgmrtqintro.htm.

PREDENTAL CURRICULUM

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

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/admissions/dds-degree 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 prosthodontics; a six-year oral and maxillofacial surgery residency training program; three-year prosthodontics, periodontics, and orthodontics programs; two-year programs in the specialties of endodontics, oral radiology, and orofacial pain and dysfunction; and 26-month programs in dental anesthesiology and pediatric dentistry.

Information on the resident programs can be obtained by writing directly to Residency Programs, School of Dentistry, A0-111 Dentistry, UCLA, Box 951762, Los Angeles, CA 90095-1762.

SCHOOL OF LAW

Rachel F. Moran, Dean

UCLA
1242 Law
Box 951476
Los Angeles, CA 90095-1476

(310) 825-4841
fax: (310) 206-6489
http://www.law.ucla.edu

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, Media, and Intellectual Property Law, Law and Philosophy, and Public Interest Law and Policy. Situated at a major gateway to the Pacific Rim, UCLA is a center of international programs; international and comparative law has become a dynamic, integral part of the law school curriculum, with courses addressing the European Union, modern Japan and China, Islam, international trade and business transactions, and a host of other related courses. Part of an outstanding research University, possessed of rich cultural resources, and located in a beautiful garden setting allowing year-round outdoor study and reflection, UCLA’s extensive educational programs afford law students myriad interdisciplinary opportunities both in the classroom and through independent research.

The technologically advanced, spacious, and comfortable Hugh and Hazel Darling Law Library—replete with natural lighting and views—houses an extensive collection of legal materials. The school’s nationally recognized clinical program offers sophisticated courses that help students develop applied lawyering skills, focus on solving client problems, and see in their education at UCLA more of what ultimately will face them as lawyers and policymakers. 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 14,000) 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 disciplines in the UCLA curriculum or from another high-quality institution; this must be arranged in consultation with the School of Law and the other selected program.

Detailed information about the academic programs offered by the School of Law, course titles and descriptions, fees, and the semester-system calendar by which it operates are available at http://www.law.ucla.edu/academic-programs-and-courses/Pages/default.aspx.

**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.

**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, at least 65 of which must be earned in regularly scheduled law class sessions. The residence requirements may be satisfied as follows: (1) six semesters in regular session in this school or (2) two semesters in regular session (or equivalent) in a school that is accredited by the American Bar Association, coupled with four semesters in regular session (or equivalent) in this school.

Every first-year student 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 requisites 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 program is open only to applicants who possess a distinguished prior academic record in law, show promise of outstanding scholarship, and demonstrate a high potential for completing a scholarly dissertation of required quality. Applicants must hold a J.D. degree or foreign equivalent and an L.L.M. degree (or be enrolled in a program leading to an L.L.M. degree). For further information, see http://www.law.ucla.edu/sjd/.

**ACADEMIC SPECIALIZATIONS FOR J.D. DEGREE**

**BUSINESS LAW AND POLICY SPECIALIZATION**

The Business Law and Policy specialization is designed for students who wish to focus their schooling in a particular area of business law and ultimately earn a certificate of completion with their J.D. degree. Students may choose from five tracks: business law; bankruptcy; mergers and acquisitions; securities regulation; and taxation. Approximately 70 courses and seminars are offered in the specialization. The five tracks are designed to provide additional guidance to students in course selection, as well as highlight the specialization's curricular strengths. Business law materials are integrated to varying degrees in the law school's first-year curriculum, typically in property, contracts, and torts. The second- and third-year curricula in the specialization include courses covering a wide variety of legal and business issues, ranging from regulation of markets to the design of business transactions.

**CRITICAL RACE STUDIES SPECIALIZATION**

The UCLA School of Law is the first American law school to offer an advanced curriculum that fosters students' systemic and rigorous study in the area of critical race studies. With many faculty members who have been instrumental in pioneering and advancing critical race theory, the Critical Race Studies specialization is essential to promoting insightful, intelligent public conversation about race relations. It is appropriate for law students who seek advanced study and/or practice in race and the law, critical race theory, civil rights, public policy, and other legal practice areas that are likely to involve working with racial minority clients and communities or working to combat racial inequality. The course of study emphasizes mastery of five areas: (1) history (centered on the Constitution but focused as well on a variety of other legal documents and experiences), (2) theory (critical race theory, jurisprudence, and theoretical advances outside the legal academy), (3) comparative subordination (understanding of the multiracial nature of American race relations, as well as how racial inequality is affected by discrimination based on gender, sexual orientation, and disability), (4) 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, MEDIA, AND INTELLECTUAL PROPERTY LAW SPECIALIZATION**

Los Angeles is the center of the entertainment industry, and recognizing the unique ability to offer a specific program in that arena, the school launched the Entertainment, Media, and Intellectual Property Law specialization in 2005. The specialization is the most comprehensive, advanced, and innovative approach to the study of entertainment and media law in the country. Students who fulfill the requirements have a solid grounding in the law, custom, theory, and policy in the motion picture, television, music, and other industries involved in creative and artistic matters. The program also prepares students who choose to work in nonprofit institutions, government, or academia in the area of entertainment, media, and intellectual property law.

**LAW AND PHILOSOPHY SPECIALIZATION**

The Law and Philosophy specialization is designed for students who want to supplement their legal studies by exploring more theoretical issues concerning the philosophical foundations of law. It is invaluable to students, especially those interested in attending graduate programs or exploring a career in academia. The specialization exposes students to material on the nature of law and legal systems, legal methodologies, and the theoretical underpinnings and justifications of particular doctrinal areas such as constitutional law, criminal law, and contract. Students need not have any prior background in philosophy, but a strong interest in the subject is recommended.

**PUBLIC INTEREST LAW AND POLICY SPECIALIZATION**

Recognizing the considerable debate about the proper role of the law in creating and sustaining a just society 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 intellectually ambitious curriculum that prepares them to engage in sophisticated representation of traditionally underserved clients and interests. The specialization, one of the nation's top such programs, has a competitive admissions process. Students represent a broad range of political and ideological perspectives and often pursue additional specializations and joint degrees. Graduates have received prestigious public interest law fellowships, and they work in a variety of settings, with focus on an array of social justice issues ranging from immigration, labor, and international human rights to healthcare, welfare, and poverty, and civil rights. Faculty members are leaders in their respective fields and have distinguished themselves by the quality of their scholarship and teaching. They represent a broad cross-section of interests on social justice issues and bring to the classroom a depth of knowledge from a wide range of experiences and research perspectives.

**ACADEMIC SPECIALIZATIONS FOR LL.M. DEGREE**

**BUSINESS LAW SPECIALIZATION**

The Business Law specialization is designed to allow students to focus in one of four tracks: business law; bankruptcy; securities regulation; and taxation.
Approximately 70 courses and seminars are offered in the specialization. The four tracks are designed to provide guidance to students in course selection, as well as highlight the specialization’s curricular strengths. The advanced curricula in the specialization include courses covering a wide variety of legal and business issues, ranging from regulation of markets to the design of business transactions. The Lowell Milken Institute for Business Law and Policy prepares students for outstanding careers and leadership in business law as well as in business, the nonprofit sector, and philanthropy. The institute simultaneously serves as a dynamic hub of research and strategy for practitioners, scholars, and experts across a variety of disciplines.

**ENTERTAINMENT, MEDIA, AND INTELLECTUAL PROPERTY LAW SPECIALIZATION**

Los Angeles is the center of the entertainment industry, and recognizing the unique ability to offer a top-notch program in that arena, the school launched the LL.M. Entertainment, Media, and Intellectual Property Law specialization in 2005. The specialization offers the most comprehensive, advanced, and innovative approach to the study of entertainment and media law in the world. Students who fulfill the requirements have a solid grounding in the law, custom, theory, and policy in the motion picture, television, music, and other industries involved in creative and artistic matters. The program also prepares students who choose to work in nonprofit institutions, government, or academia in the area of entertainment, media, and intellectual property law.

**INTERNATIONAL AND COMPARATIVE LAW SPECIALIZATION**

The school's International and Comparative Law Program is one of the best in the nation. An expansive law faculty, course offerings, colloquia and symposia, student-edited journals, externships, foreign exchange offerings, and a broad community of interested students from around the world constitute a rich milieu in which to learn about the field. The International and Comparative Law specialization builds on these strengths and directs students to coursework that may range from international business to comparative constitutional law to international human rights. Students may either select a range of international and comparative courses or pursue a specialization route that allows them to compare U.S. law with the laws of their home country.

**LAW AND SEXUALITY SPECIALIZATION**

The Law and Sexuality specialization builds on the role of UCLA Law as a leader in the field of sexual orientation and gender identity law and scholarship. The goal of the specialization is to expand the quality and extent of legal knowledge and public discourse on issues related to sexuality and law. It is affiliated with the Williams Institute, a national think tank dedicated to conducting rigorous, independent research on sexual orientation and gender identity law and public policy. Students can take classes offered by faculty members and scholars associated with the institute, to be mentored by them, and to participate in a range of institute activities, including the speaker series and annual conference, moot court competition, and the Dukeminier Awards journal. Staff from the institute work with LL.M. students to secure internships in the Los Angeles area and to establish connections between LL.M. students and international experts and organizations working in their geographic or topic area. The specialization involves coursework on comparative and/or international law with focus on sexuality issues, including a course on law and sexuality and a Sexual Orientation Workshop seminar taught by Williams Institute teaching fellows.

**PUBLIC INTEREST LAW AND POLICY SPECIALIZATION**

Exploring 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 intellectually ambitious curriculum that prepares them to engage in sophisticated representation of traditionally underserved clients and interests. The specialization, one of the nation’s top such programs, has a competitive admissions process. Students represent a broad range of political and ideological perspectives. Graduates work in a variety of settings, with focus on an array of social justice issues ranging from immigration, labor, and international human rights to healthcare, welfare and poverty, and equality rights.

**PROGRAMS AND CENTERS**

**CENTER FOR LAW AND ECONOMICS**

The mission of the Center for Law and Economics is to foster academic scholarship exploring how economics can help us better understand and improve our laws. UCLA has one of the richest law and economics traditions in the world, and many of the founders of law and economics have made UCLA their academic home. The center, along with the Anderson Graduate School of Management and the law school’s Lowell Milken Institute for Business Law and Policy, sponsors the UCLA Law, Economics, and Organization Workshop where speakers present their latest works-in-progress in the broad area of law and economics as it relates to business organizations.

**CLINICAL 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, Media, and Intellectual Property Law Program**

The Entertainment, Media, and Intellectual Property Law Program supports and expands the curricular offerings of the Entertainment, Media, and Intellectual Property Law specialization. For students interested in learning more about entertainment law, the program helps them earn externships with entertainment-related businesses, brings influential speakers to campus, and sponsors the industry’s top legal conference on entertainment issues, the annual UCLA Entertainment Symposium. Students run an entertainment-related journal, the UCLA Entertainment Law Review, as well as the student organization, the Entertainment Law Association.

**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.

**HEALTH AND HUMAN RIGHTS LAW PROJECT**

The Health and Human Rights Law Project seeks to improve global health by using a framework grounded in international human rights law. Through multidisciplinary research, training, and mentorship, the project examines the relationship between health and human rights and fosters the next generation of leaders working in this area. With an emphasis on issues pertaining to sexuality, gender, and HIV/AIDS, the project focuses on health issues around which rights-claiming has particular salience.

**INTERNATIONAL AND COMPARATIVE LAW PROGRAM**

The International and Comparative Law Program is one of the best in the nation. Permanent faculty members who have built their reputations in the field offer numerous international and comparative law courses, such as 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.

**LOWELL MILKEN INSTITUTE FOR BUSINESS LAW AND POLICY**

The central mission of the Lowell Milken Institute for Business Law and Policy is to influence the national legal and policy debate over the critical issues affecting the regulation and governance of business. The institute seeks to fulfill this mission by promoting innovative research at the intersection of law and business by a highly respected and widely recognized business law faculty, by offering a unique blend of policy and practice-oriented courses designed to prepare law students to be leaders in the new economy, and by hosting timely conferences and scholarly events on matters that advance the public discussion.

**NATIVE NATIONS LAW AND POLICY CENTER**

The Native Nations Law and Policy Center supports Native Nations to enhance their governmental institutions and laws, strengthen their cultural resource protections, and address critical public policy issues by bringing together the University’s academic resources and the knowledge and experience of tribal leaders and knowledge-holders. The center serves as the home for the Tribal Legal Development Clinic and Tribal Appellate Court Clinic that involve students in projects such as constitution drafting, code development, and law clerking for Indian nation clients.
NEGOTIATION AND CONFLICT RESOLUTION PROGRAM

The Negotiation and Conflict Resolution Program promotes an interdisciplinary approach to understanding and managing the competition for scarce resources in legal, business, and interpersonal contexts. The program's broad mission includes the study of private and public transactions and disputes in domestic and international arenas. It brings together a community of scholars and students from a variety of fields across UCLA and throughout Southern California with overlapping scholarly, teaching, and practice interests.

OFFICE OF PUBLIC INTEREST PROGRAMS

The UCLA School of Law has a long-standing commitment to public service and is committed to cultivating an environment that encourages all of its students and alumni to better serve society in myriad ways. Students gain significant exposure and experience in public service through clinical courses, a pro bono program, an externship program, extensive public interest advising and informational programming, and numerous student organizations. The Office of Public Interest Programs, the hub of the school's public interest efforts, hosts a variety of career-oriented programs and relevant public interest forums and events in which students, faculty, alumni, and the broader community participate. The office also hosts the annual Southern California Public Interest Career Day 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 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.

SANELA DIANA JENKINS HUMAN RIGHTS PROJECT

The Sanela Diana Jenkins Human Rights Project engages in a range of activities, continuously identifying and pursuing the most promising opportunities for addressing human rights issues around the globe, while at the same time advancing understanding about human rights through interdisciplinary studies. The project utilizes the best scholarship and analyses of human rights and international justice from the fields of law, politics, sociology, history, and economics to set its agenda and select human rights opportunities to pursue. And it uses its practical engagement in human rights advocacy to improve scholarly understanding. Typical activities have included the development and utilization of Web-based technologies to advance human rights; assistance to and support of prosecutors and judges in international criminal tribunals; and conferences, roundtable discussions, and speakers series focused on developing a breakthrough understanding of particular human rights challenges. The project also supports human rights and international justice by training the next generation of lawyers in the field.

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/Prelicensure) 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 experi-
ences 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 educational, 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.

**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 must complete with a passing grade a minimum of 180 units. At least 83 of the 180 units must be upper division courses numbered 100 through 199. A maximum of 216 units is permitted. Students with advanced placement or international baccalaureate credit may exceed the unit maximum by the amount of that credit.

**SCHOLARSHIP REQUIREMENT**

A 2.0 (C) average is required in all work attempted at the University of California, exclusive of courses in UCLA Extension and those graded Passed/Not Passed. A 2.0 (C) average is also required in all upper division courses in the major taken at the University, as well as in all courses applied toward the general education and University requirements. Each required nursing course in the school must be completed with a grade of C or better (C– grade is not acceptable). Elective courses may be taken on a Passed/Not Passed basis with prior approval, according to the policy listed in the Academic Policies 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 and must complete 77 of the last 97 nursing course units in residence.

**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, 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 Examinations 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– 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 (Nursing 152W) must be completed with a grade of C or better (C– or a Passed grade is not acceptable).

If approved for general education (GE) credit, applicable courses may also fulfill a GE requirement.

Transfer students with 90 or more units who have completed the Intersegmental General Education Transfer Curriculum (IGETC) will have satisfied the Writing I and Writing II requirements. No transfer student is admitted to the school without completing, with a grade of C or better (C– grade is not acceptable), a college-level writing course that the Office of Undergraduate Admissions and Relations with Schools accepts as equivalent to English Composition 3.

**QUANTITATIVE REASONING REQUIREMENT**

Students must demonstrate basic skills in quantitative reasoning. The requirement may be satisfied by completing one approved UCLA course (see list below) or an equivalent course within the first seven terms of enrollment. The course must be taken for a letter grade, and students must receive a grade of C or better (C– grade is not acceptable).

The requirement may also be satisfied by achieving an SAT Reasoning Test Mathematics Section score of 600 or higher or an SAT Subject Test in Mathematics score of 550 or higher. Approved UCLA courses and examinations, and qualifying scores, are determined by the school Student Affairs Committee. 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.

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

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### School of Nursing

**General Education Requirements**

**Foundations of the Arts and Humanities**
- Literary and Cultural Analysis .................. 1 Course
- Philosophical and Linguistic Analysis .................. 1 Course

**Visual and Performance Arts Analysis and Practice**
- .......................... 1 Course

Total = 15 units minimum

**Foundations of Society and Culture**
- Historical Analysis .................................. 1 Course
- Social Analysis ...................................... 1 Course
- Third course from either subgroup ................. 1 Course

Total = 15 units minimum

**Foundations of Scientific Inquiry**
- Life Sciences ........................................ 2 Courses
- Physical Sciences .................................... 2 Courses

Total = 18 units minimum

**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.

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**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 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**
Transfer students from California community colleges must fulfill UCLA lower division GE requirements by completing the Intersegmental General Education Transfer Curriculum (IGETC) prior to transfer. The curriculum consists of a series of subject areas and types of courses that have been agreed on by the University of California and the California community colleges. Because of course sequencing and the rigor of the program, students must fulfill the general education requirements prior to transfer.

Additional requirements are listed under admission and preparation for the major in the Curricula and Courses section.

**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 student to faithfully perform the designated work to the best of their ability. Withdrawal from, or neglect of, any course entered on the Study List, or a change in program without the formal permission of the assistant dean of Student Affairs renders students liable to enforced withdrawal from the University or other appropriate disciplinary action.

Students are expected to follow the course sequence specified for their program. After the first term, they may petition to carry a program of study exceeding 20 units provided they have an overall grade-point average of 3.0 (B or better) and have attained at least a B average in the preceding term with all courses passed.

**MINIMUM PROGRESS**
Students are expected to complete satisfactorily at least 36 units during any three consecutive terms in residence; they are placed on probation if they fail to pass these units. They are subject to dismissal if they fail to pass at least 32 units in three consecutive regular terms in residence.

**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 Examinations.** Credit earned through the College Board Advanced Placement (AP) Examinations may not be applied toward the general education requirements. Portions of AP Examination credit may be evaluated by corresponding UCLA course numbers (e.g., History 1C). If students take the equivalent UCLA course, unit credit for such duplication is deducted before graduation. See the AP Chart at http://www.admissions.ucla.edu/Prospect/APCredit.htm for UCLA course equivalents and credit allowed for GE requirements.

**COUNSELING SERVICES**

The School of Nursing gives direction and provides information to interested potential applicants to the B.S. program 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 by 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 3.897; magna cum laude, 3.822; cum laude, 3.698. 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 prelicensure and postlicensure options. The master's entry clinical nurse (MECN)/prelicensure program is designed for students with a bachelor's degree in another discipline who wish to become registered nurses. The advanced practice 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 populations include adult/gerontology acute care (with oncology specialization option), adult/gerontology primary care (with coursework specific to occupational and environmental health and gerontology available), family, 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 Program Requirements for UCLA Graduate Degrees at http://grad.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**

For complete degree requirements, see Program Requirements for UCLA Graduate Degrees at http://grad.ucla.edu/gasaa/library/pgmrqintro.htm.

**SCHOOL OF THEATER, FILM, AND TELEVISION**

Teri E. Schwartz, Dean

UCLA

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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 the Center for Art of Performance at UCLA, 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, 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, or 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, 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. 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– or a Passed grade is 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 Examinations 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

School of Theater, Film, and Television 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. Foreign Language
6. Literature
7. 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 electives and can be used to meet the minimum unit requirement for graduation.
THEATER, FILM, AND
SCHOOL OF
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human cultures, (3) fosters appreciation for the many
theses create and evaluate new knowledge, (2) intro-
reveals to students the ways that research scholars in
required courses. It is a program of study that (1)
ment.
completed in a language other than English may peti-
Students whose entire secondary education has been

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 sci-
ences create and evaluate new knowledge, (2) intro-
duces 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 intellec-
tual 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 digi-
tal; 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 require-
ments.

Foundations of the Arts and Humanities. Five 5-unit
courses, with no more than two from any one sub-
group:
Literary and Cultural Analysis
Visual and Performance Arts Analysis and Practice

The aim of courses in this area is to provide perspec-
tives 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 intro-
duce students to the historical development and fun-
damental 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 cul-
tures over time. The courses focus on a particular his-
torical 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 stu-
dents gain a fundamental understanding of how sci-
cists formulate and answer questions about the
operation of both the physical and biological world.
The courses also deal with some of the most important

School of Theater, Film, and
Television General Education
Requirements

<table>
<thead>
<tr>
<th>Foundations of the Arts and Humanities</th>
<th>5 Courses</th>
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<tbody>
<tr>
<td>Literary and Cultural Analysis</td>
<td></td>
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<td>Philosophical and Linguistic Analysis</td>
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<td>Visual and Performance Arts Analysis</td>
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<td>and Practice</td>
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<th>2 Courses</th>
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<tbody>
<tr>
<td>Life Sciences</td>
<td>1 Course</td>
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<tr>
<td>Physical Sciences</td>
<td>1 Course</td>
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<tr>
<td>Total</td>
<td>8 units minimum</td>
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Total GE .................. 10 Courses/48 Units Minimum
A course taken to meet the Writing II requirement may
not also be applied toward a GE requirement.
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 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 from 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 Examinations.** Credit earned through the College Board Advanced Placement (AP) Examinations may be applied toward the school and general education requirements. If students take the equivalent UCLA course, unit credit for such duplication is deducted before graduation. See the AP Chart at http://www.admissions.ucla.edu/Prospect/APCreditTF.htm for UCLA course equivalents and credit allowed for GE requirements.

**Graduate Courses.** Undergraduate students who wish to take graduate courses (200 level) for credit toward the bachelor's degree must petition for advance approval of the department chair and the dean of the school and must meet the specific qualifications. Courses numbered in the 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, 3.924; cum laude, 3.876. 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 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://grad.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://grad.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 page at 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/.

For a complete outline of graduate degree requirements, see Program Requirements for UCLA Graduate Degrees available on the Graduate Division website at http://grad.ucla.edu/gasaa/library/pgmrqintro.htm.

Undergraduate Course Numbering

Undergraduate courses are classified as lower division and upper division. Lower division courses (numbered 1-99) are often surveys offering preliminary introductions to the subject field. They are designed primarily for freshmen and sophomores, though upper division students may enroll for unit and grade credit.

Lower division courses may not be applied toward graduate degrees.

Upper division courses (numbered 100-199) are open to all students who have met the prerequisites 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—Let There be Light!

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 issues. Many are designed to be taken along with a tutorial course in the 195-199 series.

Upper division tutorials (numbered 195-199) offer advanced opportunities for research through faculty-supervised internships and apprenticeships as well as honors research, directed research, and senior projects. Courses are structured by the instructor and student at the time they are initiated and are open to juniors (with a minimum 3.0 grade-point average in the major field), seniors, and graduate students. To enroll, students submit a contract (available online through MyUCLA) and have it approved by both the instructor and department chair.

Note: Courses numbered 19, 89, 89HC, 99, 189, and 189HC are not listed in the print catalog. For course descriptions, see online catalog updates at http://www.registrar.ucla.edu/catalog/updates/.

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 enroll in 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

UCLA
10373 Bunche Hall
Box 951487
Los Angeles, CA 90095-1487
(310) 206-6571
e-mail: idpgrads@international.ucla.edu
http://international.ucla.edu/africanstudies/masters.asp

Allen F. Roberts, Ph.D., Chair

Faculty Committee
Walter R. Allen, Ph.D. (Education, Sociology)
Andrew Apter, Ph.D. (Anthropology, History)
Alan P. Fiske, Ph.D. (Anthropology)
Françoise Lionnet, Ph.D. (Comparative Literature, French and Francophone Studies, Gender Studies)
Edith Mukudi Omwami, Ph.D. (Education)
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)
Katrina 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 in 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.

Information on the undergraduate minor in African Studies can be found in the International and Area Studies section later in this catalog.

Graduate Study
Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website, http://grad.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 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
Graduate Courses


201B. Africa and Professions. (4) Seminar, three hours. Exploration of key contributions and debates of academic disciplines in African studies, with emphasis on professional dimension. Review of discipline’s literature, resources, career opportunities, and professionals themselves. Letter grading.

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 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

UCLA
153 Haines Hall
Box 951545
Los Angeles, CA 90095-1545
(310) 825-9821, 825-3776
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Mark Q. Sawyer, Ph.D., Chair

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Darnell M. Hunt, Ph.D., ex officio (Sociology)
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Mignon R. Moore, Ph.D. (Sociology)
Mark Q. Sawyer, Ph.D. (Political Science)
Caroline A. Streeter, Ph.D. (English)
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.

Preparation for the Major
Required: Two courses from Afro-American Studies M5, 6, M10A.

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 Afro-American Studies or civilizations of Africa course or equivalent.

Refer to the UCLA Transfer Admission Guide at http://www.admissions.ucla.edu/prospect/admission.html for up-to-date information regarding transfer selection for admission.
The Major

Required: Twelve upper division courses as follows: (1) two history and/or literature courses selected from Afro-American Studies M104A through M104D, M105D, M105A through M158E, M179A, (2) two upper division breadth courses from any of the following departments or programs: African Languages, American Indian Studies, Asian American Studies, Chicana and Chicano Studies, or General Studies, and (3) a concentration of five courses in one of the following tracks and three courses in the other: (a) humanities — Afro-American Studies 100C, M102, M103A, M103B, M103E, M104A through M104E, M107, M109, M110A, M110B, CM112A through CM112F, C130A, C130B, M145, M150D, M158A through M158E, M179A, 179B, 188A, 188B, C191, and (b) social sciences — Afro-American Studies 100B, M114C, M114D, M114E, M118, M120, M144, M150D, M154C, M158A through M158E, M159P, M163, M164, M165, M166, M167, M172, M173, M178, M179A, 179B, M182A, M182B, M183A, M183B, M183C, 188A, 188B, C191, M194A, M194B.

No more than 8 graded units of Afro-American Studies 195, 197, 198, and 199 may be applied toward the major.

Students are encouraged to engage in a culminating activity, such as an internship, independent study, honors thesis, service learning activity, such as an internship, independent. (4) M104B. African American Literature from Harlem Renaissance to 1970s. (5) (Same as English 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 (folktales, spirituals, sermons, fiction, poetry, essays), by authors such as Phillis Wheatley, Frances Harper, Frederick Douglass, Harriet Jacobs, Charles Chesnutt, Booker T. Washington, and Pauline Hopkins. P/NP or letter grading.

M104A. Early African American Literature. (5) (Same as English M104A.) 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, Zora Neale Hurston, Richard Wright, Ann Petry, James Baldwin, Gwendolyn Brooks, and Ralph Ellison. P/NP or letter grading.

M104B. African American Literature from Harlem Renaissance to 1970s. (5) (Same as English M104B.) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisite: English Composition 3 or 3H. Introductory survey of African American literature 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 focus on 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.

M104C. Contemporary African American Literature. (5) (Same as English M104C.) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisite: English Composition 3 or 3H. Introductory survey of African American literature from late 1970s to present covering range of genres, with emphasis on diversity of perspectives and styles that have emerged over past 30 years or so. Authors may include Toni Morrison, August Wilson, Octavia Butler, Anna Deavere Smith, Charles Johnson, and Rita Dove. P/NP or letter grading.

M104D. Topics in African American Literature and Culture. (5) (Same as English M104D.) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisite: English Composition 3 or 3H. Variable topics lecture course that provides opportunity to cover African American literature from wide range of the schools, departments, and programs.

Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website, http://grad.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 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 offered.

Afro-American Studies Lower Division Courses

M5. Social Organization of Black Communities. (5) (Same as Sociology 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.

6. Trends in Black Intellectual Thought. (5) Lecture, three hours; discussion, one hour. Overview of major intellectual trends that have shaped ways in which African-American thinkers have interpreted experiences of blacks in U.S., drawing from such fields as history, philosophy, and literature. Letter grading.

M10A. History of Africa to 1800. (5) (Same as History M10A.) Lecture, three hours; discussion, one hour. Exploration of development of African societies from earliest to late 18th century. P/NP or letter grading.

Upper Division Courses

100B. Psychology from Afro-American Perspective. (4) Lecture, three hours. Survey of psychological literature relevant to Afro-Americans, with emphasis on contributions of Afro-American psychologists. Topics include psychology, testing and intelligence, family, personality and motivation, racism and race relations, education, community psychology, and future of Afro-American psychology. P/NP or letter grading.


101C. African American Studies Minor Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website, http://grad.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 Study

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 offered.
of theoretical, historical, format, and thematic perspectives. Topics may include African American autobiography, visual culture, oral history, African music, and film, black diaspora literature, postmodern African American fiction, Afro-Futurism, and African American satire. May be repeated for credit with topic or instructor change. P/NP or letter grading.

**M107. Current Issues of Black Culture.** (Same as Ethnomusicology M119.) Lecture, four hours; discussion, one hour. Introduction to development of rap music and hip-hop culture, with emphasis on musical and verbal qualities, philosophical and political ideologies, gender representation, and influences on cinema and popular culture. P/NP or letter grading.

**M109. Women in Jazz.** (Same as Ethnomusicology M109 and Gender Studies M109.) 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.

**M110A-M110B. African American Musical Heritage.** (5-5) (Same as Ethnomusicology M110A-M110B.) Lecture, four hours; discussion, one hour. P/NP or letter grading. **CM110A.** African American Music and History and Survey of African American music covering Africa and its impact on America; music of 17th through 19th centuries. Impact of African and African American immigration on the formation of black in film, television, and theater; religious music, including hymns, spirituals, and gospel; black music of Caribbean and Central and South America; and music of black Los Angeles. M110B. African American music covering blues, pre-1947 jazz styles, rhythm 'n' blues, soul, funk, disco, hip-hop, and symbiotic relationship between recording industry and effects of cultural politics on black popular music productions.

**CM112A. African American Music in California.** (4) (Same as Ethnomusicology CM112.) Lecture, four hours. Historical and analytical examination of African American music in California, including history, migration patterns, and urbanism to determine their impact on development of African American music in California. Concurrently scheduled with course CM212A. P/NP or letter grading.

**CM112D. African American Art.** (4) (Same as Art History CM112D.) Lecture, three hours. Detailed inquiry into work of 20th-century African American artists whose works provide insight and critical commentary about African American society, including visits to various key African American art institutions in Los Angeles. Concurrently scheduled with course CM212D. P/NP or letter grading.

**CM112E. African American Theatre.** (4) (Same as Art History CM112E.) Lecture, three hours. Continuation of course CM112D, involving detailed inquiry into work of 20th-century African American artists. Concurrently scheduled with course CM212E. P/NP or letter grading.

**CM112F. Imaging Black Popular Culture.** (4) (Same as Art History CM112F.) Lecture, three hours. Critical examination of media ranging from African American painting and sculpture to MTV and advertising, with emphasis on relationship between black visual production and racism, Afrocentrism, political resistance, and notions of blackness. Concurrently scheduled with course CM212F. 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). Described for seniors/juniors. Analysis of black radicalism in mid-20th century, with special attention to contributions of Malcolm X, and role of African American liberation movement or letter grading.

**M118. Student-Initiated Retention and Outreach Issues in Higher Education.** (4) (Same as American Indian Studies M118, Asian American Studies M118, 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; discussion, one hour. Differentiation of legal status, socio-economic, sociocultural, and urban studies preferred but not required. Survey course to examine major debates and current controversies concerning public policy responses to social problems in America. P/NP or letter grading.

**C130A. Black Diaspora: Ghana and African Americans — Connections and Crosscurrents.** (4) Lecture, three hours; fieldwork, one hour. Exploration of historically and culturally significant connections between African Americans and Ghana as part of larger discourse on contemporary black diaspora. Attention to past that linked African Americans to Ghana through Atlantic slave trade and impact on both Ghana and those Ghanians who became American slaves. Consideration of development of Ghana since trade ended, following its history as both colony of Britain and as independent state, with focus on cultural, intellectual, and political connections between African Americans and Ghana (and West Africa more broadly) over time. Concurrently scheduled with course C230A. P/NP or letter grading.

**C130B. Black Cultural Diaspora: Question of African Cultural Extension, or Extinction among Black Americans.** (4) Lecture, three hours; fieldwork, one hour. Consideration of important intellectual and cultural connections between African cultures in black America. Did enslaved people from Africa arrive in North America completely devoid of their cultures? Did they maintain some cultural attributes before and after their transatlantic voyages? Did African cultures invisible by end of U.S. Civil War? How was culture of African Americans transformed across time and space? Who are major contributors to this debate and what have been their intellectual and methodological approaches? How can study of Ghanaian cultures contribute to this discourse? Focus on traditional cultures of West Africa, particularly Ghana, and its imprint on black culture in North America. Concurrently scheduled with course C230B. P/NP or letter grading.

**M144. Ethnic Politics: African American Politics.** (4) Same as Political Science, three or four hours; discussion, one hour (when scheduled). Preparation: one 140-level political science course or one upper division course on race or ethnicity from history, psychology, or sociology. Emphasis: Political Science 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 given special attention for analysis. Three primary objectives: (1) to provide descriptive information about social, political, and economic conditions of black community, (2) to analyze important political issues facing black community, and (3) to deepen students' analytical skills. P/NP or letter grading.

**M145. Ellingtonia.** (4) (Same as Ethnomusicology M111.) Lecture, three hours. Music of Duke Ellington, his life, and far-reaching influence of his efforts. Ellington's music, known as "Ellingtonia," is one of largest and perhaps most important bodies of music ever produced in U.S. (Elaborate mention of other artists who worked with Ellington, such as composer Billy Strayhorn and musicians Johnny Hodges, Countie Williams, and Mercer Ellington. P/NP or letter grading.

**M154C. Black Experience in Latin America and Caribbean I.** (4) (Same as Political Science M184A.) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Culture, history, politics, and identity of African Americans in Spanish and Lusophone Caribbean, South America, and Central America. Exploration of issues of identity in context of Afro/Latino migration to U.S. P/NP or letter grading.

**M154D. Black Experience in Latin America and Caribbean II.** (4) (Same as History M154B.) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Examination of slave experiences of African and African American families in the Americas. Exploration of issues regarding race and ethnicity in Latin America, with emphasis on comparisons to U.S. and African America. Covers populations of African and indigenous origins, with emphasis on former. P/NP or letter grading.

**M158A. Comparative Slavery Systems.** (4) (Same as History M158A.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Examination of slave experiences in various New World slave societies, with emphasis on outlining similarities and differences in slave labor and treatment, and slave cultures of North American, Caribbean, and Latin American slave societies. P/NP or letter grading.

**M158B-M158C. Introduction to Afro-American History.** (4-4) (Same as History M150B-M150C.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Survey of Afro-American experience, with emphasis on three great transitions—Afro-American life: transition from slavery to New World slavery, transition from slavery to freedom, and transition from rural to urban milieu. P/NP or letter grading.

**M158D. Introduction to African American Nationalism in First Half of 20th Century.** (4) (Same as History M150D.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Critical examination of African American search in first half of 20th century for national/group cohesion through collectively built institutions, associations, organized protest movements, and ideological self-definition. P/NP or letter grading.

**M159P. Constructing Race.** (4) (Same as Anthropology M159P and Asian American Studies M169.) Lecture, three hours. Examination of race, socially constructed category, from anthropological perspective. Consideration of development of racial categories over time and in different regions, racial passing, multiracial identity in U.S., whiteness, race in popular culture, and race and identity. P/NP or letter grading.

**M163. Investigative Journalism and Communities of Color.** (4) (Same as Communication Studies M163.) Lecture, three hours. Role of investigative journalism in understanding interethnic conflict and cooperation. Exploration of different perspectives on issues by comparing mainstream, ethnic, and innovative media coverage. P/NP or letter grading.

**M164. Afro-American Experience in U.S.** (4) (Same as Anthropology M164.) Lecture, three hours. Promotes understanding of contemporary sociocultural forms among Afro-Americans in U.S. by presenting comparative and diachronic perspective on Afro-
American experience in New World. Emphasis on utilization of anthropological concepts and methods in understanding the origins and maintenance of particular patterns of adaptation among black Americans. 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; discussion, one hour. Limited to juniors/seniors. Exploration of relationship between race/ethnicity, employment, and U.S. labor movement. Analysis of underlying racial divisions in workforce and how they evolved historically. Consideration of circumstances under which workers and unions have excluded people of color from jobs and unions, as well as circumstances under which workers and unions have organized people of color into unions in efforts to improve their wages and working conditions. Impact of globalization on these dynamics. P/NP or letter grading.

M166. 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 genesis, maintenance, and social functions. General problems and issues in fields of sociolinguistics examined through case-study approach. Letter grading.

M167. Worker Center Movement: Next Wave Organizing for Justice for Immigrant Workers. (4) (Same as Asian American Studies M166C, Chicana and Chicano Studies M130, and Labor and Workplace Studies M167.) Seminar, three hours. Development of theoretical and practical understanding of workers center movement, with focus on historical factors that have led to emergence and growth of worker centers and their potential to promote ethno- and multicultural 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 Gender Studies M172 and Psychology M172.) Lecture, two and one-half hours. Designed for juniors/seniors. Impact of social, psychological, political, and economic forces which impact on interactions 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 Asian American Studies M169, Chicana and Chicano Studies M130, Labor and Workplace Studies M167.) Lecture, three hours; discussion, one hour. Overview of nonviolence and its impact on social movements both historically and in current context in contemporary society, featuring lectures, conversations, films, readings, and guest speakers. Exploration of some historic contributions of civil rights struggles and role of nonviolent action throughout recent U.S. history. Examination of particular 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 and development underdevelopment, race making institutions and evolution of race relations, nationalism and migration. P/NP or letter grading.

M179A. Topics in African American Literature. (4) (Same as English M191A) Seminar, three or four hours. Enforced requisite: English Composition 3 or 3H. Variable specialized studies course in African American literature. Topics may include Harlem Renaissance, African American literature in 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.

M179B. Special Studies in Comparative Literature: Caribbean. (4) (Same as Education M188B) Seminar, three hours. General introduction to literature of English-speaking Caribbean by reviewing its historical and geographical background. To analyze historical process toward self-determination in literature, following topics are included: (1) Literature for community, (2) external relationships (ancestor, kinship, 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 requisite: 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 requisite: 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 (2) (Same as Education M182C.) Fieldwork, six hours. Enforced requisite: 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.

M183A. Language, Literacy, and Human Development Ethnography (3) (Same as Education M183A.) Fieldwork, six hours. Enforced requisite: 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 Education M183B.) Fieldwork, six hours. Enforced requisite: 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.

M188A. Special Courses in Afro-American Studies. (4) Seminar, four hours. Program-sponsored experimental seminar experience, often taught by visiting faculty members. May be repeated for credit with topic change. P/NP or letter grading.

M188B. 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 effective have they been in closing racial gap? Provides students with basic foundation of knowledge for thinking through contemporary debates surrounding policies that seek to redress racial discrimination in U.S. P/NP or letter grading.

C191. Variable Topics Research Seminar: Afro-American Studies. (4) Seminar, four hours. Research seminar on selected topics in Afro-American studies. Reading, discussion, and development of culminating project. May be repeated for credit. Concurrent or scheduled corequisite: course M194A or M194B. P/NP or letter grading.

M194A. Language, Literacy, and Human Development Research Group Seminars (5) (Same as Education M194A.) Seminar, three hours; laboratory, two hours (when scheduled). Enforced requisite: 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.

M194B. Culture, Gender, and Human Development Research Group Seminars (5) (Same as Education M194B.) Seminar, three hours; laboratory, two hours (when scheduled). Enforced requisite: 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 gender. May be taken independently for credit. Letter grading.

M194C. Culture, Communications, and Human Development Research Group Seminars (5) (Same as Education M194C.) Seminar, three hours; laboratory, two hours (when scheduled). Enforced requisite: 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 or Corporate Internships in Afro-American Studies. (4) Tutorial, four hours. Preparation: 3.0 grade-point average in major. 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. Eight units may be applied toward major requirements. May be repeated for credit. Individual contract with supervising faculty member required. P/NP or letter grading.

196. Research Apprenticeship in Afro-American Studies. (4) Tutorial, three hours. Limited to juniors/seniors. Entry-level research apprenticeship under guidance of faculty mentor affiliated with Afro-Ameri can Studies major or minor. Independent research project culminating in term paper in African American studies or related field required. Research may be in part or totally in relation to faculty member's research. May be repeated for credit. Individual contract required. Letter grading.

197. Individual Studies in Afro-American Studies. (2 to 8) Tutorial, four hours. Preparation: 3.0 grade-point average in major. Limited to juniors/seniors. Individual intensive study, with scheduled meetings to be arranged between faculty member and student. Assigned reading and tangible evidence of mastery of subject matter required. Eight units may be applied toward major requirements. May be repeated for credit. Individual contract required. P/NP or letter grading.

198. Honors Research in Afro-American Studies. (2 to 4) Tutorial, four hours. Limited to juniors/seniors. Development and completion of honors thesis or comprehensive research project under direct supervision of faculty member. May be repeated for credit. Individual contract required. Letter grading.

199. Directed Research or Senior Project in Afro-American Studies. (2 to 4) Tutorial, to be arranged with faculty member who directs study. Preparation: 3.0 grade-point average in major. Limited to juniors/seniors. Supervised individual research or investigation of large project under guidance of faculty mentor. Culminating paper or project required. Eight units may be applied toward major requirements. May be repeated for credit. Individual contract required. Letter grading.

Graduate Courses

M200A. Advanced Historiography: Afro-American. (4) (Same as History M200A) Seminar, three hours. May be repeated for credit. Individual contract with supervising faculty member required. Letter grading.

200B. 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 black and other racial and ethnic groups in U.S. Presented in context that is at once comparative and international, seminar emphasizes internationalism and transnationalism as well as
uniqueness of Afro-American condition. Attempts to relate black condition in U.S. to socioeconomic system of this country to compare it to political, social, and economic conditions of African peoples elsewhere. S/U or letter grading.

M200C. Black Families and Relationships. (4) (Same as Sociology M262.) Seminar, three hours. Evaluation and historical forces that affect socialization, stability, and interaction in black intimate relationships, beginning with theoretical framework from black feminism to analysis of economic and cultural relationship for partners in cohabiting and other types of unions. Examination of family life for both middle-class and low-income populations. Exploration of notions of black sexuality, including imagery of hyper-masculinity and femininity with black body and critical intermingling of notions of blackness and authenticity in racial identification. Contribution to greater understanding of black intimate relationships in different contexts, including lesbian and gay identities, Caribbean and other ethnic identities, and interracial intimacies. 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 power, 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 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.

M200F. African American Psychology. (4) Seminar, three hours. Survey of psychological literature as it pertains to persons of African American descent. Critical review of implications of “mainstream” research on African Americans, including discussion of research on family, academic achievement, and psychological assessment (testing). Emphasis also on theoretical approaches advanced by African American scholastic perspectives. Examination of racism in psychology, and research in black communities. S/U or letter grading.


CM212F. Imaging Black Popular Culture. (4) (Same as Art History CM212F.) Lecture, three hours. Critical examination of media ranging from African American painting and sculpture to MTV and advertising, with emphasis on relationship between black visual production and racism, Afrocentrism, political resistance, and notions of black identity. Concurrently scheduled with course CM112F. S/U or letter grading.

C200A. Black Diaspora: Ghana and African Americans — Connections and Crosscurrents. (4) Lecture, three hours; fieldwork, one hour. Exploration of history of transatlantic relationship between African Americans and Ghana as part of larger discourse on contemporary black diaspora. Attention to past that linked African Americans to Ghana through Atlantic slave trade and impact on both Ghana and those Ghanians who became American slaves. Consideration of development of Ghana since trade ended, following its history as both colony of Britain and as independent state. Examination of cultural, intellectual, and political connections between African Americans and Ghana (and West Africa more broadly) over time. Concurrently scheduled with course C130A. S/U or letter grading.

C200B. Black Cultural Diaspora: Question of African Cultural Retention, Extension, or Extinction among African Americans. (4) Lecture, three hours; fieldwork, one hour. Consideration of important intellectual perspectives on history of traditional West African cultures in black America. Did enslaved people from Africa arrive in North America completely devoid of their cultures? Did they maintain some cultural attributes for some generations? Were all vestiges of African cultures invisible by end of U.S. Civil War? How was culture of African Americans transformed across time and space? Who are major contributors to this debate and what have been their intellectual and methodological approaches? How can study of Ghanaian cultures contribute to this discourse? Focus on traditional cultures of West Africa, particularly Ghana, and its imprint on black culture in North America. Concurrently scheduled with course C130B. S/U or letter grading.

M240. Assessment and Treatment of African American Families. (3) (Same as Psychiatry M240.) Seminar, two hours. Designed for graduate students. Course aids mental health professionals and trainees in evaluation and treatment of African American families in terms of their cultural milieu, historical background, and economic status. Didactic presentations by instructors and invited guest forms basis for supervised evaluation and case management with African American children and families. Letter grading.

241. Special Topics in Afro-American Studies. (4) Lecture, four hours; discussion, one hour. Intensive research and study of major themes and issues in various areas of Afro-American studies, S/U or letter grading.

M252S. Constructing Race. (4) (Same as Anthropology M252S.) Seminar, three hours. Examination of social construction of race from anthropological perspective in order to refine understanding of ways this category has and continues to have concrete impact in U.S. Exploration of range of topics, including role of discipline of anthropology has played in construction of race, representations of race in popular culture, instability of race revealed in passing and debates about multicultural identity, construction of whiteness, and emergence of identity politics. S/U or letter grading.

M256. Topics in African American Art. (4) (Same as Art History M256.) Seminar, three hours. Required: course CM112D or CM112E or CM112F. Topics in African American art from 18th century to present. May be repeated for credit in consent of graduate advisor. S/U or letter grading.

270A. Survey of Afro-American Research. (4) Seminar, three hours. Overview of research methodologies in humanities and social sciences, with firsthand reports from faculty in various fields. Introduction to research in and related to Afro-American studies and application of such research. Letter grading.
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

The American Indian Studies major is a designated capstone major. Seniors complete a research/service experience and participate in a tutorial where faculty members help them relate their course-derived academic experience to their original research/service efforts involving Native American communities. Through their capstone work, students demonstrate their skills at analyzing and synthesizing knowledge, show their capacity to work collaboratively with peers, and display their capacity to relate their academic research and discourse to Native American community needs and concerns. Students present their work at the Native American Studies Conference and through more culturally specific courses.

The curriculum encompasses the cultural, historical, political, and social experiences of Native Americans in the Americas. Through courses on Native American literature, language, theater, and contemporary societies and through more culturally specific courses on California Indians, cultures of the Pueblo southwest, and so on, the major provides an in-depth and broad knowledge on the experience of Native Americans not only in the U.S. and Canada but in Mexico and elsewhere in Latin America as well.

Given the increasingly multicultural society of the U.S. and the economic revitalization of many Native American communities, a knowledge of American Indian studies greatly enhances the professional and scholarly contributions attainable for those seeking postgraduate degrees in various related disciplines and fields.

Preparation for the Major

Required: American Indian Studies M10 and two courses from Anthropology 9, Gender Studies 10, Political Science 40, Statistics 12. Each course must be completed with a grade of C or better.

Transfer Students

Transfer applicants to the American Indian Studies major with 90 or more units must complete as many of the following introductory courses as possible prior to admission to UCLA: one introduction to American Indian studies course and two courses from culture and society, introduction to gender studies, introduction to American politics, or introduction to statistical methods.

Refer to the UCLA Transfer Admission Guide 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 expressive culture courses from American Indian Studies 180, Art History C117A, C117D, 118D, English 106, Ethnomusicology 106A, 106B, Theater 103F, 107, (f) one methodology course from Anthropology 139, 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 M130A, M130B, M130C, 131A, 132A, 133, 134, Chicana and Chicano Studies CM182, Communication Studies 124, Film and Television 128, Gender Studies 130, 168, Sociology 154, 156, or M162) or one comparative indigenous studies course (Anthropology 153P, Geography M131, History 135A, or Sociology 157).

2. American Indian Studies C122SL (experiential service learning or supervised internship)

3. American Indian Studies 199C (capstone course)

Each course must be taken for a letter grade, and students must have an overall grade-point average of 2.0 or better. No more than two independent studies courses (199s) may be applied toward the degree.

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 office for more information.

To qualify for graduation with honors, students must (1) complete all requirements for the major, (2) have a cumulative grade-point average of 3.5 or better in the major course requirements and an overall GPA of 3.0 or better, and (3) complete American Indian Studies 198A-198B-198C, taken with a professor who agrees to mentor and guide them through the stages of senior essay design and development during their senior year. Completion of a senior thesis is required.

American Indian Studies Minor

The American Indian Studies minor is designed for students who wish to augment their major program of study in the College of Letters and Science with a group of related courses from various disciplines germane to American Indian studies. The minor exposes students to Indian-related research and literature in a number of different disciplines, such as American Indian studies, anthropology, economics, history, political science, sociology, and theater.

To enter the minor, students must be in good academic standing (2.0 grade-point average), have completed 45 units, and file a petition at the American Indian Studies Center, 3220 Campbell Hall. All degree requirements, including the specific requirements for this minor,
must be fulfilled within the unit maximum set forth by the College of Letters and Science.

Required Lower Division Course (5 units): American Indian Studies M10 with a grade of C or better.

Required Upper Division Courses (28 units):
Seven courses selected from the following: (1) one American Indian languages and communication systems course (Anthropology C144 or Linguistics 114); (2) three history and social sciences courses from American Indian Studies C120, C121, C122SL, C130, 140, 158, C170, C175, C176, Anthropology 113Q, 113R, 114P, 114Q, 114R, 158, 172R, Gender Studies 130, History 149A, 149B, 157B, Sociology M161; (3) three humanistic perspectives on language and expressive culture courses from American Indian Studies 180, Art History 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 requirements or another minor; and at least 16 units applied toward the minor must be taken in residence at UCLA. Transfer credit for any of the above is subject to program approval; consult the interdepartmental advisor 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://grad.ucla.edu/gasass /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 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 Internship 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 strategies 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.

C120. Working in Tribal Communities: Introduc- tion. (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 for Native nation-building project. Concurrently scheduled with course C220. Letter grading.

C121. Working in Tribal Communities: Preparing for Fieldwork. (4) Lecture, four hours. Through readings, discussion, Native guest lecturers, and project participation, introduction to rules of conduct and skills necessary to successfully work or carry out community service learning and service learning projects in Native American communities and organizations. Concurrently scheduled with course C221. Letter grading.

C122SL. Working in Tribal Communities: Service Learning. (4) Seminar, one hour; fieldwork, four hours. Enforced co-requisite: course C121. Recommended: course C120. 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 C222SL. Letter grading.


140. Federal Indian Law and Policy. (4) Lecture, four hours. Through readings, discussion, and Native guest lecturers, 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, three hours. Lectures and 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 indigenous nations. Concurrently scheduled with course C245. Letter grading.

158. Nation Building. (4) Lecture, three hours; fieldwork/research, nine hours. Limited to junior/senior American Indian Studies majors. Examination of historical interplay of federal policies with tribal cultures that has shaped patterns of American Indian tribal nations. Current developments within Indian nations, including restructuring government, developing economies, and asserting cultural sovereignty, to be subject of research, study, and required community-based projects. Letter grading.

M161. Comparative American Indian Societies. (4) (Same as Sociology M161.) Lecture, three hours. Requires: course M10 or concurrent C1, Comparative and historical study of political, economic, and cultural change in indigenous North American societies. Several theories of social change, applied to selected case studies. Letter grading.

M216P. 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 revitalize these languages. Projected loss as many as half of world’s languages by end of 21st century can only be explained as outcome of such factors as nationalism, global economic forces, language ideological change, and language shift away from smaller indigenous and tribal languages. Since loss of such languages means both reduction of cultural as well as linguistic diversity, many affected communities have engaged in various language renewal practices. Examination of some diverse strategies that have been attempted, including immersion, language and culture classes, master-apprentice, interactive multimedia, mass media approaches, and language performance approaches. Evaluation of effectiveness of these measures and of very imagery used to discuss language endangerment. P/NP or letter grading.

CM268P. 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 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.

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 and/or instructor change and consent of interdepartmental chair. Concurrently scheduled with course C270. Letter grading.

C175. Cultures of Native Southern California. (4) Lecture, three hours. Introduction to Southern California indigenous societies through 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 C275. Letter grading.

C178. California Experiences in Native Cultural Resource Management. (4) Seminar, three hours. Exploration of creation and implementation of laws that affect cultural resource management in California, such as California Environmental Quality Act (CEQA), Native American Graves Protection and Repatriation Act (NAGPRA), AB 878 (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 C278. Letter grading.

180. Introduction to and Practicum in Native American Languages. (3) Laboratory, one hour. Development of ability to converse, read, and write at elementary level in Native American languages. Introduction to both phonological and grammatical structures, vocabulary, and cultural patterns of using language as symbolic guide to culture. May be repeated with language change and approval of interdepartmental chair. Letter grading.
187. Special Topics in American Indian Studies. (4) Lecture, four hours; discussion, one hour. Topics selected from the following: Myth and Folklore of Indian Societies; Contemporary American Indian Literature; Social Science Perspectives of American Indian Life; Law and American Indian; History of American Indians (cultural area); Dance and Music of American Indians (cultural area); American Indian Policy. Consult Schedule of Classes for topics and instructors. May be repeated twice for credit.

195. Community Internships in American Indian Studies. (4) Tutorial, two hours; fieldwork, eight hours. Prerequisite: 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 of approaches to a variety of needs of American Indian communities. May be repeated for maximum of 8 units. Individual contract with supervising faculty member required. P/NP 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 required. May be repeated for credit. Individual contract required. P/NP or letter grading.

198A-198B-198C. Honors Research in American Indian Studies. (4-4-4) Tutorial, one hour; activity, three hours. Course 198A is enforced requisite to 198B, which is enforced requisite to 198C. Limited to seniors honored program students. Development and completion of a thesis or complete minor in research project under direct supervision of faculty member. Each course may be repeated for credit. Individual contract required. Letter grading.

199. Directed Research or Senior Project in American Indian Studies. (2 to 8) Tutorial, one hour. 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.

199C. Individual Studies: Capstone Synthesis. (4) Tutorial, three hours. Preparation: successful completion of eight upper division major courses. Limited to seniors and majors. Faculty members help students relate their course-derived academic experience to their original research/service efforts involving Native American communities. Completion of research paper and presentation of student work at year-end Research Symposium required. Must be taken in conjunction with American Indian Studies C122SL or an alternative upper division course approved by program chair and academic coordinator. Individual contract required. Letter grading.

Graduate Courses

M200A. Advanced Historical Geography: American Indian Peoples. (4) Same as History M200W. Lecture, 90 minutes; seminar, 90 minutes. Introduction to cultural histories of North American Indians and review of Indian concepts of history. Stereotypical approach to content and methodologies related to Indian past that is interdisciplinary and multicultural in its scope. Letter grading.

M200B. Cultural World Views of Native America. (4) Same as English M266. Seminar, three hours. Exploration of myths and oral traditions 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 methodological approaches taken from literary analysis, ethnography, musicology and ethnomusicology. May be repeated for credit with instructor and/or topic change. Letter grading.


M201. 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 Policy and Management M202 and Nursing M221. Seminar, three hours. Introduction to some theoretical and methodological issues in American Indian studies and exploration of methods that can be used to incorporate them in research on American Indian cultures, societies, languages, and other issues. Quantitative methods (design, appropriate use), with emphasis on qualitative research methods, ethics, and special considerations in conducting research in American Indian country. Design of research and exploration of feasibility of researching topics. Letter grading.

M220. Working in Tribal Communities: Introduction. (4) Lecture, four hours. Through readings, discussion, and Native guest lecturers, students learn to participate in 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.

M221. Working in Tribal Communities: Preparing for Fieldwork. (4) Lecture, four hours. Through readings, discussion, Native guest lecturers, and project participation, introduction to rules of conduct and skills necessary to carry out community service projects for Native American communities and organizations. Concurrently scheduled with course C121, S/U or letter grading.

M222SL. Working in Tribal Communities: Service Learning. (2 to 6) 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 M228). (Same as Law M228.) Seminar, two hours. Course M228A is enforced requisite to 228B. Study of traditional and contemporary legal systems of Native American tribal nations. Delineated 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 adaptation of 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 grading.


M238A-238B. Tribal Legal Development Clinic. (1 to 8 each) (Formerly numbered M238.) (Same as Law M238A, B.) Seminar, two hours. Enforced requisite to 238B. Students provide pro bono legal assistance to Indian nations. Projects include development and modification of tribal legal codes and constitution, analysis of tribal dispute resolution processes, and drafting of inter-governmental agreements. Legislative drafting and cross-cultural representation skills emphasized. Faculty members meet with tribal leaders to inform them of availability of clinic services and determine whether clinic could assist them with their legal development needs. Once students are assigned to particular projects, they meet with relevant tribal officials and community groups with travel funds supplied. Students learn about tribal governments and legal systems, including federal constraints on activities of tribal legal institutions, and culture of the courts. Students are expected to be able to craft legislation and other documents that meet tribal intentions and needs. In Progress (M238A) and S/U or letter grading.

M245. Contemporary Indigenous Nations. (4) Seminar, three hours. Introduction to contemporary indigenous nations, including social movements, social and cultural change and continuity, nation building, law and justice relations, economic development, education and health, and political relations, comparative policy, colonialism, migration, national and social identities, and other issues and social cultural processes, seen as distinct from ethnic, race, class, and national identities of indigenous communities that have maintained self-government, territory, and culture. Investigation and search for analytic and policy patterns that give greater understanding and knowledge about current conditions and social and cultural processes of indigenous nations. Concurrently scheduled with course C145. S/U or letter grading.

M261. 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 continuities of Native American nations, primarily of U.S., but elsewhere also. Discussion of theories of change, comparative methodological, and case materials. Letter grading.

M265. Federal Indian Law I. (4 or 6) (Same as Law M265.) Lecture, three hours. Three 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 adjudication, and regulatory jurisdiction. Special attention to status and sovereign powers of Indian nations as recognized under U.S. law, federal trust responsibility, and equal protective issues posed by federal and state legislation concerning Indian nations, primarily of U.S., but elsewhere also. Focus on theory of change, comparative methodological, and case materials. Letter grading.

M265A-265B. Federal Indian Law I. (1 to 8 each) (Formerly numbered M267.) (Same as Law M267.) 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.
M276. Federal Indian Law II. (1 to 8 each) (Same as Law M382.) Lecture, three hours. Requisites: courses M238A and 238B, or M265A and 265B. Examination in-depth of principles and doctrines of federal Indian law as applied to property rights in land, cultural resources, hunting and fishing rights, water rights, and economic development. Special jurisdictional regimes established by federal statutes, such as Indian Child Welfare Act and Indian Gaming Regulatory Act, addressed. S/U or letter grading.

M267A-267B. Federal Indian Law II. (1 to 8 each) (Same as Law M382.) Lecture, three hours. Requisites: courses M238A and 238B, or M265A and 265B. Course M267A is enforced requisite to 267B. 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 grading. 

CM268P. Perspectives on Health of Native North Americans. (4) (Same as Anthropology CM268P.) 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 CM1168P. S/U or letter grading.

C270. California Indian History. (4) Lecture, four hours. Introduction to overview of California Indian history, specific tribal community histories, and/or contemporary California 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.

C272. Seminar: Cultural Property Law. (3 or 4) (Same as Law M514.) Seminar, three hours. Exploration of identity, ownership, appropriation, and repatriation of both tangible and intangible cultural property — those items that are of great significance to cultural heritage and cultural survival of people. Understanding of importance of preservation of cultural property as means of maintaining group identity, self-determination, and collective rights. Examination of both international and domestic law governing these issues, addressing such questions as How should cultural property be defined? Can cultural property be protected under existing intellectual property and cultural property regimes? How can we balance protection of cultural property against need or desire for its use in creative expression or scientific advancement? Examination of cultural property of groups in general, with emphasis on cultural property of indigenous peoples, including folklore, traditional knowledge, burial grounds, sacred sites, and ancient ceremonies and traditions. S/U or letter grading.

C275. Culture 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 C175. S/U or letter grading.

C278. California Experiences in Native Cultural Resource Management. (4) Seminar, three hours. Exploration of creation and implementation of laws that affect cultural resource management in California, such as California Environmental Quality Act (CEQA), Native American Graves Protection and Repatriation Act (NAGPRA), AB 976 (California NAGPRA), American Indian Religious Freedom Act, National Environmental Policy Act (NEPA), and National Historic Preservation Act (NHPA), from an 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.

575. Teaching Apprentice Practicum. (1 to 4) Seminar, to be arranged. Preparation: appointment of instructor, 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.


For further details on the Department of Anesthesiology and a listing of the courses offered, see http://www.anes.uc.edu.

Anesthesiology
Upper Division Course

199. Directed Research in Anesthesiology. (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.

ANTHROPOLOGY

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Alessandro Duranti, Ph.D.
Alan Page Fiske, Ph.D.
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Akhil Gupta, Ph.D.
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Joan B. Silk, Ph.D.
Susan E. Stylomvics, Ph.D.
Monica L. Smith, Ph.D.
Charles S. Stanish, Ph.D.
Marko Tarnano, Ph.D.
Russel Thornton, Ph.D.
Thomas S. Weisner, Ph.D., in Residence
Yuxin Yan, Ph.D.

Professors 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)
Sondra Hale, Ph.D.
Peter B. Hammond, Ph.D.
Allen W. Johnson, Ph.D.
Lewis L. Langness, Ph.D.
Claudia I. Mitchell-Kernan, 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.
Dwight W. Read, Ph.D.
James R. Sackett, Ph.D.
Johannes Wilbert, Ph.D.
Bobby Joe Williams, Ph.D.

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law, federal trust responsibility, and equal protection issues posed by federal and state legislation singling out Indian nations and tribes. 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 where directions courts, tribes, and government may take in addressing current legal issues in Indian country. In Progress (M265A) and S/U or letter grading.

C275. Cultures of Native Southern California. (4) Lecture, three hours. Introduction to Southern California indigenous societies through readings, discussion, guest lecturers, and direct community participation. May be repeated for credit with topic change and consent of interdepartmental chair. Concurrently scheduled with course C175. S/U or letter grading.
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 link up in a holistic, 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 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; Chemistry and Biochemistry 14A, 14B, 14BL, 14C, and 14CL, or 20A, 20B, 20L, 30A, and 30AL; Life Sciences 1, 2, 3, 4, 23L; 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 completed the following introductory courses 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.

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, and one culture and communication course.

Refer to the UCLA Transfer Admission Guide at http://www.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 approach 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.

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, 23L; 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 culture and communication course, two general biology courses for majors, one year of calculus, one year of general chemistry with laboratory, one year of general physics with laboratory, and one lower division organic chemistry course.

Refer to the UCLA Transfer Admission Guide at http://www.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.

Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website, http://grad.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 Anthropology offers Master of Arts (M.A.) and Doctor of Philosophy (Ph.D.) degrees in Anthropology.

Anthropology

Lower Division Courses

1. Welcome to America: American Culture for International Students. (4) Lecture, four hours. Designed for incoming international students. Introduction to American culture from anthropological perspective. Exploration of central aspects in American culture, including immigration, ethnic diversity, family, popular culture, and myths and realities about values in life and values in U.S. from anthropological perspective. Emphasis on ordering and interpretation of archaeological evidence. Required for incoming international students. Limited to 20 lower division students. Readings and discussions designed to introduce students to current research in discipline. Culminating project may be required. May be repeated for credit with topic change. P/NP or letter grading.

2. America through Lenses of Popular Culture. (4) Lecture, four hours. Designed for students interested in life and values in U.S. from anthropological perspective. Exploration of popular culture as experienced by Americans from various age groups, ethnic heritages and genders, and regional locations. Topics include music and film, advertising, sports, other entertainment, food, and technology. Employment of anthropological methods of inquiry and brief fieldwork. P/NP or letter grading.

3. Human Evolution. (5) Lecture, three hours; discussion, one hour. Required as preparation for both bachelor’s degrees. Evolutionary processes and evolutionary past of human species. P/NP or letter grading.

4. Archaeology: Introduction. (4) Lecture, three hours; discussion, one hour; fieldwork. Required as preparation for both bachelor’s degrees. Introduction to study of culture and society in comparative perspective. Examples from societies around world to illustrate basic principles of formation, structure, and distribution of human institutions. Of special concern is contribution to understanding problems of modern world. P/NP or letter grading.


6. Culture and Communication. (5) Lecture, three hours; discussion, one hour. Required as preparation for both bachelor’s degrees. Introduction to study of communication from anthropological perspective. Formal linguistic methods compared with ethnohistorically oriented methods focused on context-bound temporal unfolding of communicative activities. Topics include language in everyday life and ritual events, socialization, literacy, multilingualism, miscommunication, political discourse, and art-making as cultural activity. P/NP or letter grading.

7. Culture and Society. (5) Lecture, three hours; discussion, one hour. Required as preparation for both bachelor’s degrees. Introduction to study of culture and society in comparative perspective. Exploration of popular culture as experienced by Americans from various age groups, ethnic heritages and genders, and regional locations. Topics include music and film, advertising, sports, other entertainment, food, and technology. Employment of anthropological methods of inquiry and brief fieldwork. P/NP or letter grading.

8. Archaeology of North America. (4) Lecture, three hours; discussion, one hour. Required as preparation for both bachelor’s degrees. Introduction to study of culture and society in comparative perspective. Exploration of popular culture as experienced by Americans from various age groups, ethnic heritages and genders, and regional locations. Topics include music and film, advertising, sports, other entertainment, food, and technology. Employment of anthropological methods of inquiry and brief fieldwork. P/NP or letter grading.

9. Pleistocene Geology and Chronology. (4) Lecture, three hours; discussion, one hour. Lecture, one hour; fieldwork. Required as preparation for both bachelor’s degrees. Required as preparation for both bachelor’s degrees. Introduction to study of culture and society in comparative perspective. Exploration of popular culture as experienced by Americans from various age groups, ethnic heritages and genders, and regional locations. Topics include music and film, advertising, sports, other entertainment, food, and technology. Employment of anthropological methods of inquiry and brief fieldwork. P/NP or letter grading.

10. Archaeology of Asia. (4) Lecture, three hours; discussion, one hour. Lecture, one hour; fieldwork. Required as preparation for both bachelor’s degrees. Required as preparation for both bachelor’s degrees. Introduction to study of culture and society in comparative perspective. Exploration of popular culture as experienced by Americans from various age groups, ethnic heritages and genders, and regional locations. Topics include music and film, advertising, sports, other entertainment, food, and technology. Employment of anthropological methods of inquiry and brief fieldwork. P/NP or letter grading.

11. Archaeology of Africa. (4) Lecture, three hours; discussion, one hour. Lecture, one hour; fieldwork. Required as preparation for both bachelor’s degrees. Required as preparation for both bachelor’s degrees. Introduction to study of culture and society in comparative perspective. Exploration of popular culture as experienced by Americans from various age groups, ethnic heritages and genders, and regional locations. Topics include music and film, advertising, sports, other entertainment, food, and technology. Employment of anthropological methods of inquiry and brief fieldwork. P/NP or letter grading.


33. Culture and Communication. (5) Lecture, three hours; discussion, one hour. Required as preparation for both bachelor’s degrees. Introduction to study of communication from anthropological perspective. Formal linguistic methods compared with ethnohistorically oriented methods focused on context-bound temporal unfolding of communicative activities. Topics include language in everyday life and ritual events, socialization, literacy, multilingualism, miscommunication, political discourse, and art-making as cultural activity. P/NP or letter grading.

34. Introduction to Urban Speech Communities. (4) Lecture, three hours; discussion, one hour. Introduction to study of speech communities in metropolitan areas, with special focus on communities in Los Angeles. Emphasis on ways in which communities share and incorporate speech norms of urban society while maintaining rules for conduct and interpretation of speech within specific speech communities. Topics include language and identity, socialization, social diacritics, and communication. P/NP or letter grading.

88A. Sophomore Seminars: Anthropology. (2) Seminar, 90 minutes. Limited to 20 lower division students. Readings and discussions designed to introduce students to current research in discipline. Culminating project may be required. May be repeated for credit with topic change. P/NP or letter grading.

Upper Division Courses

Archaeology

110P. Principles of Anthropology. (4) Lecture, three hours. Prerequisite: course 8. Intended for students interested in conceptual structure 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) Lecture, three hours. Prerequisite: course 8. Intended for students interested in conceptual structure of scientific archaeology. Introduction to field 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 in their scholarly publications or theoretical models. Systematic instruction in digital data management and mining, scientific analysis of artifacts (including geologic and chemical 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. Prerequisite: course 8. Method and theory with emphasis on archaeology within context of anthropology. Themes include theoretical development over the past 50 years, structure of archaeological reasoning, and selective survey of work on problems of general anthropological interest. P/NP or letter grading.

112. Old Stone Age Archaeology. (4) Lecture, three hours. Prerequisite: course 8. Development of Paleolithic cultural traditions in Europe, Africa, Asia, and New World. Emphasis on ordering and interpretation of archaeological evidence, with special focus on cultural and biological evolution. P/NP or letter grading.

113P. Archaeology of North America. (4) Lecture, three hours. Prerequisite: course 8. Development of Native American sociocultural traditions (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. Emphasis on California Indians by Euro-Americans. P/NP or letter grading.

114R. 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. Emphasis on theoretical 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 focused on theory and data from archaeological, historical, and ethnographic literature. Illustration of how people in ranked non-state societies created remarkably rich cultures over 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 of Mesoamerica from late Pleistocene through 1492. Focus on pre-Hispanic political and economic structures, 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. Topics vary and may include specific analytical techniques and topics in archaeology of pre-Hispanic Mesoamerica. Specific topics vary but include archaeology and ethnohistory, ancient Mesoamerican religions, Olmec art and archaeology, and Maya. P/NP or letter grading.

115N. Archaeology of Ancient Civilizations: China. (4) Lecture, three hours. Examination of current developments and key issues in archaeology of early Chinese civilizations, with special focus on development of sociopolitical, economic, and social institutions. Contextualization of these issues in framework of world prehistory and comparative civilizations, addressing archaeological theories and methods, as well as major research projects and debates that contribute directly to current interpretations of social changes observed in archaeological record. Letter grading.

115P. Archaeology of Prehistoric China. (4) Lecture, three hours. Enforced requisite: course 8. Detailed survey of prehistoric archaeological sequence of China, ranging from early Pleistocene (about two million years ago) to initial rise of Chinese state around 2100 B.C.E. P/NP or letter grading.

115Q. Archaeological Field Training. (6 or 15) CM215R. Concurrently scheduled with course C215R. Letter grading.

116P. Archaeology of Ancient Civilizations: Egypt. (4) Lecture, three hours. Study of social complexity and interregional interaction networks, and early civilizations in Egypt. Emphasis on how people in ranked non-state societies created remarkably rich cultures over entire globe beginning several millennia ago. 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. P/NP or letter grading.

116Q. Topics in Archaeology of Ancient Civilizations: Egypt. (4) Lecture, three hours. Topics vary and may include specific analytical techniques and topics in archaeology of Ancient Egypt. Specialized consideration of particular regions or topics in archaeology of Ancient Egypt is well known for its iconic archaeological sites such as Giza Pyramids and Tomb of Tutankhamun. From these and thousands of less well-known sites, enormous variety of archaeological information can be gleaned. Through discussion of particular archaeological themes, regions, or sites, examination of methods of prehistoric and historic archaeology and how archaeological information contributes to understanding of social, political, and religious history. Background provided for development of group research projects — finding resources, data gathering, analysis, interpretation, presentation methods, and how to embark on research in this field. Computer laboratory component included in which student research is performed and presented in time map. P/NP or letter grading.

118P. Cities Past and Present. (4) Lecture, three hours. Enforced requisite: course 9. Themes may include any aspect of ancient and modern cities to evaluate how urban form developed and continues to thrive as human social phenomenon. Contemporary comparisons with archaeological cities including South America, Asia, Africa, and ancient Near East. Letter grading.

Environmental Archaeology

120. Survey of Biological Anthropology. (4) Lecture, three hours. Limit to majors and graduate anthropology students. Survey of biological anthropology including all major subareas. Core course for biological field. P/NP or letter grading.

121A. Primate Fossil Record. (4) Lecture, three hours. Enforced requisite: course 7 or 12. Introduction to method and theory in paleoanthropology. Primate evolution, Cretaceous through Miocene. May be taken independently for credit. P/NP or letter grading.


121C. Evolution of Genus Homo. (5) Lecture, three hours; discussion, one hour. Enforced requisite: course 7 or 12. Origin and evolution of genus Homo, including archaic hominids and Neanderthals. Morphology, ecolo- gy, and behavior of these groups. Course ends with appearance of modern humans. May be taken independently for credit. P/NP or letter grading.

121P. Reconstructing Hominid Behavior and Paleoenvironment. (4) Seminar, three hours. Use of paleo-archeological, archaeological, and ecological evidence to infer late Pliocene and early Pleistocene hominid behavior and environmental context of human evolution. P/NP or letter grading.

121Q. Paleoenvironment in Review. (6) Lecture, three hours; seminar, three hours. Corequisite: course 12. Limit to juniors/seniors. Designed for advanced students with interest in integration of fossil evidence, and theoretical constructs. Students attend course 12 lectures, plus three-hour seminar per week. P/NP or letter grading.

122P. Human Osteology. (4) Lecture, three hours; laboratory, four hours. Study of structure of human skeletal and muscular systems, concerned with both form and function. Students expected to recognize important anatomical landmarks on human skeleton, identify fragmentary bones, and outline gross functional and action of major muscles. How to sex and age skeletons and introduction to paleopathology. Letter grading.

122A. Human Behavioral Ecology. (4) (Formerly numbered 124.) Lecture, three hours. Recommended requisite: course 7 or Life Sciences 1. Survey of re-
search in human behavioral ecology. Review of natu-
ral and sexual selection, kin selection, and reciprocal altruism. Examination of selected topics in modern human behavior from evolutionary perspec-
tive, including social organization, sexual division of labor, parenting strategies, conflict, and cooperation. P/NP or letter grading.

124B. Evolutionary Anthropology. (4) Lecture, three hours. Recommended requisite: course 7 or Life Sci-
ences 1. Survey of research in evolutionary psychol-
ogy. Review of relevant theory in evolution and genet-
ics. Emphasis on empirical study of modern human behavior from evolutionary perspective, including so-
cial behavior, decision making, language, culture, and child development. P/NP or letter grading.

124P. Evolution of Human Sexual Behavior. (4) Lecture, three hours; discussion, one hour. Recom-
manded requisite: course 7 or 12. Examination of hu-
man sexual relations and social behavior from evolu-
tionary perspective. Emphasis on theories and evi-
dence for differences between men and women in their patterns of growth, maturation, fertility, mortality, paren
ting, and relations with members of opposite sex. Letter grading.

M125A. Cultural Adaptations: Origins of Complexity in Nature. (4) Formerly numbered 125A.) (Same as Eco-
logy and Evolutionary Biology M171.) Lecture, three hours. Enforced requisite: course 7 or Ecology and Evolutionary Biology 12D or Life Sciences 1. Evolution of complex adaptations in nature. Examina-
tion of fundamental processes underlying natural se-
lection and evolution of adaptation: Darwin’s postula-
tes, constraints on adaptation, levels of explanation in biological systems for identifying adaptations. Evalua-
tion of examples of complex adaptations in nature. Letter grading.

126. Selected Topics in Biological Anthropology. (4) Lecture, three hours. Discussion of selected topics in biological anthropology. Consult Schedule of Classes for topics and instructors. May be repeated for credit with topic change. P/NP or letter grading.

M127. Animal Communication. (9) (Same as Ap-
plied Linguistics 127.) Lecture, four hours. Designed for Anthropolo-
y, Applied Linguistics, and Communication Studies majors. Evolution, functions, design, and diversity of animal communication systems such as bird song, dolphin calls, whale song, primate social signals, and human language. Letter grading.

127P. Primate Evolution. (4) Lecture, three hours. Design-
ed for seniors. A survey of primate paleo-
tology, ontological and evolutionary record, encompassing prosimians, New and Old World monkeys, and homi-
oids. Attendant aspects of paleoecology and behav-
or. P/NP or letter grading.

128A. Primate Behavior: Nonhuman to Human. (4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Review of primate behavior as known from laboratory and field studies. Theoretical issues of animal behavior, with special reference to nonhuman primates. Discussion of human behavior as product of such evolutionary processes. P/NP or letter grading.

128B. Behavioral Ecology of Primates. (4) Lecture, three hours. Designed for seniors. Analysis of evolu-
tion of sociality, sexual strategies, parenting behav-
or, fighting and contests, and altruism and coopera-
tion in primate species. Letter grading.

129G. Paleopathology. (4) Lecture, three hours. De-
signed for seniors. Discussion of disease and trauma, as preserved in skeletal remains of ancient and modern human populations. Discussions of med-
ical procedures (treatment), health status, ethnic mutuality, commensals, cannibalism, sacrifice and role of such activities have played in human societies. Letter grading.

Cultural Anthropology

130. Study of Culture. (4) Lecture, three hours; dis-
cussion, one hour (when scheduled). Required: 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 be-
avior, as systems of meaning and cognition, as gen-
erative and social systems, as component in social action and reality construction. (Core course for cultural field.) P/NP or letter grading.

131. Culture: What Makes It All Work. (4) Lecture,
three hours; preparation: two lower division social sci-
cies courses (most social science departments). Examin-
ation of some basic questions addressed by anthropologists in their study of what is meant by cul-
ture. Consideration of theories of culture and evolu-
tion, origins of culture. Review of new analytic methods that allow students to begin to do quasi-ex-
erimental research into nature of culture and intro-
duction to multileagent simulation as framework for modeling how culture may be both intracognitive and embedded in minds of culture bearers. P/NP or letter grading.

133F. Anthropology of Food. (4) Lecture, three hours. Recommended requisite: course 9. Produc-
tion, consumption, and distribution of food, with par-
ticular emphasis on culture of food. Food is wonderful means to look at range of topics: ecological history, class, poverty, hunger, ethnicity, nationalism, capital-
ism, gender, race, slavery.

133P. Visual Anthropology: Documentary Photog-
raphy. (4) Lecture, three hours. Photographs in an-
thropology serve many purposes: as primary data, il-
lustration of books, documentation for dis-
appearing cultures, evidence of fieldwork, material objects for museum exhibitions, and even works of art. Topics include relationships between subject and treat-
ment of image, between art photography and ethnog-
rapher’s overall work. Letter grading.

133Q. Symbolic Systems. (4) Lecture, three hours. De-
signed for juniors/seniors. Analysis of anthropolog-
ical research and theory on cultural systems of thought, behavior, and communication expressed in symbolic mode (as distinguished from discursive, in-
strumental, and causal modes). Methods for study of symbolic meaning, including experiential approach, P/NP or letter grading.

133R. Aesthetic Systems. (4) Lecture, three hours. De-
signed for juniors/seniors. Provides framework for cross-cultural understanding of aesthetic phenomena that meets requirements of anthropological research. Human capacities for aesthetic experience; sociocul-
 tural formation of aesthetic systems; extra-aesthe-
 thics; experiential dimension of aesthetic produc-
tion. Letter grading.

133S. Ethnomathematics and Anthropology of Nu-
meration. (4) Lecture, three hours. Counting systems such as one, two, three, and their equivalent of one, two, three, infinity are widespread in human societies. Counting things is important part of every-
day life. But indigenous thinking goes far beyond pragmatics of counting, and conceptual systems un-
derlying counting are integrated with concepts people have about themselves and their societies. Numeracy is product of social life and not just reflection of one’s experience with physical world. Exploration of differ-
ent ways that indigenous mathematical thinking is embed-
 ded in human societies and cultures, ranging from use of fractions in African art to algebra of kinship; terminologies to cosmological systems formulated around concepts of numbers, P/NP or letter grading.

M134. Cultural Construction of Gender and Sexu-
ality: Homosocialities. (4) (Same as Honors Colle-
gium M134.) Lecture, three hours. Comparative anal-
ysis of role of environment, history, and cul-
ture in structuring of patterns of same-sex erotic behavior in Asia, Africa, Middle East, Pacific, Caribbe-
an, and aboriginal America. P/NP or letter grading.

135A-135B. Introduction to Psychological Anthro-
pology. (4-5) P/NP or letter grading.

135A. Historical Development. (4) Lecture, three hours; discussion, one hour (when scheduled). En-
forced requisite: course 9. Limited to juniors/seniors. Survey of field of psychological anthropology, with

emphasis on early foundations and historical devel-
opment of field. Topics include study of personality, pathological development, existence of conscious-
ness, cognition, motivation, and emotion in different cultural settings. P/NP or letter grading.

135B. Current Topics and Research. (5) Lecture, three hours; discussion, one hour. Designed for juniors/se-
niors. Survey of field of psychological anthropology, with emphasis on current topics and research. Topics include study of personality, pathology and deviance, altered states of consciousness, cognition, motiva-
tion, emotion in different cultural settings. P/NP or letter grading.

135C. Seminar: Psychocultural Studies. (4) Semi-
nar, three hours. Requisite: course 9. Firsthand expo-
sure to current research in psychocultural studies. Various university scholars discuss their on-going re-
search. Using these presentations as models, stu-
dents develop proposals for future research. P/NP or letter grading.

135D. Anthropology of Deviance and Abnormality. (4) Lecture, three hours. Required: course 9. Relation-
ship between culture and recognition of, responses to, and forms of deviant and abnormal behavior. Letter grading.

135T. Psychoanalysis and Anthropology. (4) Le-
cture, three hours; discussion, one hour (when sched-
ed). Exploration of mutual relations between anthro-
pology and psychoanalysis, considering both theory and method. History of anthropologists’ involvement in psychoanalysis; anthropological critiques of psycho-
analytic theory and method, toward cross-cultural psychoanalytic approach. Letter grading.

136G. Laboratory for Naturalistic Observations: Developing Skills and Techniques. (4) Laboratory, three hours. Skill of observing and recording behavior in natural settings, with emphasis on field training and practice in observing behavior. Group and individual projects. Discussion of some uses of observations and their implications for research in social sciences. P/NP or letter grading.

137. Selected Topics in Cultural Anthropology. (4) Lecture, three hours; discussion, one hour (when scheduled). Study of selected topics in cultural an-
thropology. Consult Schedule of Classes for topics and instructors. May be repeated for credit. P/NP or letter grading.

139. Field Methods in Cultural Anthropology. (5) Lecture, three hours; discussion, one hour. Designed for juniors/seniors. Introduction to skills and tools of data ascertainment through fieldwork in cultural anthropol-
y. Emphasis on field methods, and concepts of ethnographic research and how basic observational information is systematized for presen-
tation, analysis, and cross-cultural comparison. Letter grading.

M139P. Fieldwork in Asian American and Pacific Islander Communities. (4) (Same as Asian Ameri-
can Studies M134A.) Lecture, three hours; discussion, one hour. Introduction to qualitative research methods and application of techniques in data collection, analy-
sis, and reporting. Critical reflection of issues related to identity, migration, multiculturalism, tourism, and indigenous rights. Field excursions and guest lectur-
ers from local community included. Given in Hawaii. P/NP or letter grading.

Linguistic Anthropology

M140. Language in Culture. (8) (Same as Linguistics M140.) Lecture, three hours; discussion, one hour; fieldwork, two hours. Requisite: course 33 or Linguis-
tics 20. Study of language as aspect of culture; rela-
tion of habitual thought and behavior to language; and language as a classification, categorization, and Holis-
tic approach to study of language, with emphasis on relationship of linguistic anthropology to fields of bio-
 logical, cultural, 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. De-
signed for juniors/seniors. Course has two interrelated objectives: (1) to introduce students to ethnography
of communication — description and analysis of situated communicative behavior — and sociocultural knowledge that are embedded in a context for interactive tasks. The course aims to develop students’ linguistic, proxemic, and kinesic aspects of face-to-face interaction. Letter grading.

142A-142B. Microethnography of Communication. 3-4 hours. Prerequisite: course M140. Course 142A or Sociology M142A is requisite to 142B. Students make primary recordings (sound tape, videotape, or film) of naturally occurring social interactions that are elicited in class, for interactive tasks, research projects, and accomplishments displayed. Laboratory and fieldwork outside of class and minimal fees to offset costs of equipment maintenance and insurance. Cross-listed: P or letter grading.

M142R. Culture of Jazz Aesthetics. (4) Same as Ethnomusicology M130 and World Arts and Cultures M136. Lecture, three hours. Prerequisite: course 9 or 33 or Ethnomusicology 20A or 20B or 20C or World Arts and Cultures 20. Aesthetics of jazz from point of view of musicians who shaped jazz as art form in 20th century. Listening to and interacting with professional jazz musicians who answer questions and give musical practice in eliciting linguistic data from informants. Initial participation. P/NP or letter grading. Letter grading.

M143C. Methods in Linguistic Anthropology. (4) Lecture, three hours. Prerequisite: course M140. Practice in eliciting linguistic data from informants. Initial focus on phonetic transcription and phonological structures; introduction to skills and strategies pertinent to historical, synchronic, and textual analysis. Practice with native speakers of non-Indo-European languages is normally important aspect of student participation. P or letter grading.

C144. Native American Languages and Cultures. (4) Lecture, three hours. Prerequisite: course 33 or American Indian Studies M10. Introduction and comparative analysis of sociocultural aspects of language use in Native North American Indian speech communities. Specific foci include both micro- and macro-sociolinguistic topics. Micro-sociolinguistic topics are comprised of such issues as multilingualism, cultural differences regarding appropriate communicative behavior and variation within speech communities (e.g., male and female speech, baby talk, ceremonial speech, etc.). Macro-sociolinguistic considerations include language change and language in American Indian education. Concurrently scheduled with course C243P. P or letter grading.


146. Language and Culture of Polynesia: Past, Present, and Future. (4) Lecture, three hours. Prerequisite: course 33. Introduction to Polynesian cultures and languages, with particular emphasis on past and present sociocultural systems, patterns of language structure and language use, verbal art, language, sociolinguistic 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 or letter grading.

M148W. Talk and Body. (3) Same as Applied Linguistics M161W and Communication Studies M123W. Lecture, four hours; discussion, one hour. Enforced requisite: course 9 or Composition 3 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 analytically co-located with talk. Prerequisite: course 33. Language as social phenomenon. Introduction to several angles from which language use can be critically examined as integral to interactions between individuals and between social groups. Letter grading.

149B. Gender and Language in Society. (4) Lecture, three hours; discussion, one hour (when scheduled). Prerequisite: 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. Prerequisite: course 33. Examination of communicative, political, and poetic aspects of use of two or more languages (multilingualism) by individuals and by groups. Broaden perspectives of their genesis, maintenance, and historical significance. Language use can be critically examined as integral to interactions between individuals and between social groups. Letter grading.

149D. Language, Culture, and Education. (4) Lecture, three hours. Prerequisite: course 33. Examination of various ways in which language is 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 M125S. Seminar, four hours. Exploration of process of socialization through language, and socialization to use language across lifespan, across communities and social classes, 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. Prerequisite: course 33. Examination of forms of participation and talk-interaction across various phases of life cycle from birth to old age as portrayed in videotaped interactions of naturally occurring activities. How language and interaction within specific contexts are used to constitute identity, and how different ordering resulting 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, discussion, one hour. Prerequisite: course 33. Examination of how language practices contribute to expression of gendered identities in different social groups and situations. Completion of 20 hours of service learning in community service 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


M151. Marriage, Family, and Kinship. (4) Same as Gender Studies M151S. Lecture, three hours. Prerequisite: course 9. Examination of understandings of kinship in cross-cultural perspective and impact of kinship on interpersonal relationships, gender roles, and sociocultural systems. Readings from popular materials and formal ethnographic accounts. P or letter grading.

152. Politics: Tribe, State, Nation. (4) Lecture, three hours. Cross-cultural examination of politics and political organization. Survey of various types of political order: corporate groups; ideology. Relations of political institutions to other institutions of society and to issues of identity and representation. Letter grading.


153P. Economic Anthropology. (4) Lecture, three hours. Prerequisite: course 9. Introduction to anthropological examination of modes of production, distribution, and consumption of goods and services in their relation to social networks, power structures, and institutions of family, kinship, and class. P or letter grading.


155. Women’s Voices: Their Critique of Anthropology of Japan. (4) Same as Gender Studies M155S. 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 periods. P or letter grading.

M155Q. Women and Social Movements. (4) Same as Gender Studies M155Q. Lecture/discussion, three hours. Recommended preparation: prior gender studies or anthropology courses. Comparative study of social movements (e.g., feminist, anti-nuclear, 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 or letter grading.

156. Anthropology of Religion. (4) Lecture, three hours. Survey of various methodologies in comparative study of 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-cultural ly. P 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 or letter grading.

158. Hunting and Gathering Societies. (4) Lecture, three hours. Prerequisite: course 9. Survey of hunting and gathering societies. Examination of their distinctive features from the material and cultural viewpoints. Discussion of possibility of developing general framework for synthesizing these two viewpoints. Use of this synthesis as basis for illustrating relevance of hunting and gathering societies as understanding of complex societies. P or letter grading.
167. Urban Anthropology, (4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Introduction to modern cities and urban life. Examination of the built environment, frames of reference and social process in city systems and how these shape or contest perspectives and priorities on urban issues. P/NP or letter grading.


Regional Cultures

Africa

171. Sub-Saharan Africa, (4) Lecture, three hours. Issues of ecology and political economy; continuing impacts of colonialism, nationalism, and current challenges for development; changes in social relations. Examination of Africa's significance for the development of anthropology. Cultural background for understanding contemporary events in Africa provided. Letter grading.

171P. Culture Area of Maghrib (North Africa), (4) Same as Arabic M171 and History M196C. Lecture, three hours. Designed for juniors/seniors. Introduction to North Africa, especially Morocco, Algeria, Tunisia, and Libya, also known as Maghrib or Tell-Agym. 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 seniors/introduction. Consideration of diversity of Native American societies north of Mexico, including their origins, formation, and development. Particular attention to subsistence systems and their relations to social institutions and cultural practices, especially religion. Letter grading.

172B. Change and Continuity among Native North Americans, (4) Lecture, three hours. Consideration of the complexity of cultural change in Native American societies and cultures. Letter grading.

172R. Cultures of Pueblo Southwest, (4) Lecture, three hours. Survey of ethnographic and ethnographic historical research of Pueblo peoples (Zuni, Hopi, and Keresan) and their immediate neighbors. Basic information on history, languages, social organization, and traditional cultural systems of these groups. P/NP or letter grading.

Middle America

173Q. Latin American Communities, (4) Lecture, three hours. Overview of social and cultural anthropology of small communities in Latin America. Similarities and contrasts in social organization and inter-personal relations described in context of economic, political, and cultural environments. P/NP or letter grading.

South America

174P. Ethnography of South American Indians, (4) Lecture, three hours. Introduction to ethnography of South American Indians, with special emphasis on Lowland South America. Survey of history and development of man and society in this world area and examination of exemplary cultures and traditional and modern points of view of levels of cultural achievement. P/NP or letter grading.

Asia

175Q. Ideology and Social Change in Contemporary China, (4) Lecture, three hours. Introduction to sociocultural changes in China from 1949 to present. Topics include ideology and politics in everyday life, social stratification and mobility, cultural construction of socialist person, changes in courtship, marriage, and family, and political economy of reforms in post-Mao era. P/NP or letter grading.

175R. Societies of Central Asia, (4) Lecture, three hours. Overview of culture and society among diverse peoples of Inner Asia, including Mongolia, Tibet, and Soviet Central Asia. Topics include historical and economic adaptation, politics in traditional isolation and within framework of recent national integration, kinship, forms of marriage and status of women, religion and social order, population, contact zones, and current problems of modernization. P/NP or letter grading.

175S. Japan, (4) Lecture, three hours. Overview of contemporary Japanese society. General introduction, kinship, marriage and family life, social mobility and education, norms and values, religions, patterns of interpersonal relations, social deviance. P/NP or letter grading.

175T. Civilizations of East Asia, (4) Lecture, three hours. General anthropological introduction to closely linked civilizations of China, Korea, and Japan, providing comparative analysis of fundamental institutions such as family, state, and religion and assessing effects of urbanization and industrialization. Letter grading.

175U. Cultures of Indonesian Archipelago, (4) Lecture, three hours. Introduction to past and contemporary civilizations and cultures of Indonesia, including Javanese, Balinese, Toraja, Dayak, and Minangkabau. Geographical, ecological, and historical overview with examination of such topics as religious and political institutions, art, symbolism and ritual, illness and healing, and psychological issues and themes. P/NP or letter grading.

175V. Ethnology of Korea: Re-Presenting Lives in Contemporary South Korea, (4) Lecture, three hours. Examination of South Korea's contemporaneous structural positioning, with focus on its dynamic development out of history of colonialism and war to capitalism; multiple and conflicting linkages of Korean people involving class, gender, family/kinship, and nation. Letter grading.

175W. Chinese Family and Kinship, (4) Lecture, three hours. Examination of family and kinship organization in traditional China, with focus on transformation of these institutions on mainland China during Maoist era, and role of familial culture in economic development of Taiwan, Hong Kong, Singapore, and mainland China in post-Mao era. Letter grading.

Middle East

176. Culture Area of the Middle East, (4) Lecture, three hours. Study of Middle East has suggested many theories as to developmental history of humankind, evolution of human society, birth of monotheism, and origin of agriculture, trade, and cities. Presentation of anthropological material relevant to understanding Middle East as culture area, and Islam as basis of its shared tradition. Letter grading.
Pacific

177. Cultures of Pacific. (4) Lecture, three hours. Four major culture areas of Australia, Melanesia, Polynesia, and Micronesia. General geographical features, prehistory, and language distribution of whole region. Distinctive sociocultural features of each culture area presented in context of their adaptive significance. P/NP or letter grading.

M177. Ethnic Identity and Ethnic Relations in Hawai`i. (4) (Same as Asian American Studies M143A.) Lecture, three hours; discussion, one hour. Continuing construction and expression of ethnic identity in variou s and overlapping social contexts in Hawai`i. 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 Hawai`i. Given in Hawai`i. P/NP or letter grading.

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


182. History of Anthropology. (4) Lecture, three hours. Brief survey of development of Western social science, particularly anthropomy, from Greek and Roman thought to emergence of evolutionary theory and concept of culture in late 19th century. "Root paradigm" of Western social science and its influence on such notables as Durkheim, Freud, Hall, Lombroso, Marx, Piaget, Terman, and others. Consideration of how modern sociocultural and Eurocentrism, sexism, racism, perception of deviance, and view of culture in general. P/NP or letter grading.

183. History of Anthropology. (4) Lecture, three hours. Preparation: at least one upper division ar chaeology course. Development of world archaeology from Renaissance to present, stressing how each major branch of archaeology has evolved special character determined by peculiarities of its own data, methods, and intellectual affiliation. P/NP or letter grading.

185A-185B. Theoretical Behavioral Ecology. (4-4) Lecture, three hours. Preparation: at least one upper division introduction to behavioral ecology course, one un versity-level mathematics course (preferably calculus or probability and statistics). Course 185A is requisite to 185B. Students expected to do simple algebra, elementary calculus, and probability. Rich body of mathematical theory describing evolution of animal behavior exists. Introduction to this body of theory at pace and mathematical level that allows students to grasp material. Within each area of theory (e.g., kin selection, optimal foraging theory, etc.), presentation of basic corpus of models so that students understand assumptions that underlie models, and how main results are derived. Presentations supplemented by survey of results published in literature, especially those derived using more advanced methods. Letter grading.


Special Studies

191. Variable Topics Research Seminars: Anthropology. (4) Seminar, three hours. Research seminar on selected topics in anthropology. Reading, discussion, and development of culminating project. Consult Schedule of Classes for topics and instructors. May be repeated for credit with topic change. P/NP or letter grading.

191HA. Beginning Seminar. (4) Seminar, three hours. Limited to anthropology honors program students. Survey of major research strategies in anthropology to aid honors students in developing research proposals. Letter grading.

191HB. Field Methods. (4) Seminar, three hours. Limited to anthropology honors program students. Survey of major field methods in anthropology to prepare students to conduct their own field research. Letter grading.

191HC. Data Analysis. (4) Seminar, three hours. Limited to anthropology honors program students. Survey of major forms of data analysis in anthropology to aid honors students in analysis of their research data. Letter grading.

191HD. Writing for Anthropology. (4) Seminar, three hours. Limited to anthropology honors program students. Teaching of writing skills, with focus on how to write honors theses. Letter grading.

191HE. Writing for Publication and Conference Presentations. (4) Seminar, three hours. Limited to anthropology honors program students. Preparation of honors theses for publication and for conference presentations. May meet concurrently with graduate research seminar. Letter grading.


194. Research Group Seminars: Anthropology. (4) Seminar, one hour. Limited to undergraduate 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 seminar. May be repeated for credit with topic change. P/NP grading.

197. Individual Studies in Anthropology. (2 to 8) Tutorial, to be arranged. Limited to juniors/seniors. Individual intensive study, with scheduled meetings to be arranged between faculty members and student. Assigned readings and tangible evidence of mastery of subject matter (e.g., paper or other product) required. May be repeated for credit. Individual contract required. P/NP or letter grading.

199. Directed Research in Anthropology. (2 to 6) Tutorial, to be arranged. Limited to junior or senior. Supervised individual research or investigation under guidance of faculty mentor. Culminating paper or project required. May be repeated for credit. Individual contract required. P/NP or letter grading.

Graduate Courses

200. Conceptualizing Anthropological Research. (4) Seminar, three hours. Introduction to process of conceptualizing research projects, including formulating and theorizing research questions and developing appropriate methodology to carry out research. Preparation of proposals and presentation to group for critique. S/U or letter grading.

200P. Cultural Anthropology Field Preparation. (4) Seminar, three hours. Preparation for field 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 (vaccines,-country, entry, health concerns) also addressed. S/U grading.

M201A-M201B. Graduate Core Seminars: Archaeology. (4-4) (Same as Archaeology M201A-M201B.) Seminar, three hours. May be repeated for credit. Limited to graduate students in archaeology in archaeology field seminar. Field seminars discussions based on carefully selected list of 25 major works related to development of archaeology in social science. Emphasis on multidisciplinary background.

210. Biological Anthropology Colloquium. (4) Seminar, three hours. Selected topics on status of current research in biological anthropology. May be repeated for credit. S/U or letter grading.

203A-203B-203C. Core Seminars: Sociocultural Anthropology. (4-4-4) Seminar, three hours. Letter grading.


204. Core Seminar: Linguistic Anthropology. (4) Seminar, three hours. Preparation: one term of anthropology. Study of theoretical and methodological foundations of study of language structure and language use from sociocultural perspective. Discussion of linguistic, philosophical, psychological, and anthropological contributions to understanding of verbal communication as social activity embedded in culture. S/U or letter grading.

Archaeology


CM210Q. Introduction to Archaeological Sciences. (4) (Same as Asian Near East CM298.) 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 in their scholarly and theoretical models. Systematic instruction in digital data management and mining, scientific analysis of materials (including geological and biochemical techniques), and visual presentation of data and research results (ranging from simple graphs to virtual reality). Concurrently scheduled with course CM110Q. S/U or letter grading.

211. Classification in Archaeology: Method and Theory. (4) Seminar, three hours. Limited to graduate anthropology and archaeology students. Discussion of issues that have guided arguments about how archaeological classification of artifacts should be conducted, with focus on ceramic classification and discovery of cultural types. Methods for implementing discovery approach to classification illustrated with lithic and 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. Preparation and ethnography of hunter/gatherer peoples. Consideration of range of issues, including life in pre-colonial and technological innovations, exchange systems, settlement and mobility, and social change. May be repeated for credit. S/U or letter grading.

M215S. Selected Laboratory Topics in Archaeology. (4) (Same as Archaeology M205A) Lecture, three hours. Designed for graduate students in archaeology or in other departments. Specialized analysis of par-
ticular classes of cultural remains. Topic may be one of following: zoarchaeology, paleoethnobotany, ceram-amics, lithic analysis, rock art. Laboratory experience with collections and data. May be repeated for credit with topic change. S/U or letter grading.

M212T. Intensive Laboratory Training in Archaeology. (6) (Same as Archaeology M205SB.) 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, ce-ramics analysis, paleoethnobotany, and paleoethnobot- any. 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. Mesoamerican and Andean civilizations normally constitute major fo-cus of seminar. May be repeated for credit. S/U or letter- ing.

CM214S. Comparative Study of Ancient States. (4) (Same as Archaeology M214.) Lecture, three hours. Comparative anthropological study of first complex societies of Near East, Mesoamerica, and Andes, includ-ing early Egyptian, Urk, Teotihuacan, classic Maya, Wari, and Tiwanaku, with focus on political and economic structures of these societies and on causes of state formation and collapse. Concurrently sched-uled with course C114S. 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, pre-liminary analysis of field data, and project organization/supervision. May be repeated for credit. S/U or letter grading.

C215R. Strategy of Archaeology. (4) Seminar, three hours. Introduction to problem formulation, theory, and method in archaeology, with emphasis on develop-ment of research designs. Focus on how archaeo-logical research is conceived and planned, with con-sideration of differing viewpoints and their usefulness. Concurrently scheduled with course C115R. Com-plete research proposal required of graduate stu-dents. Letter grading.

M216. Topics in Asian Archaeology. (4) (Same as Art History M262A.) Lecture, three hours. Designed for graduate students may include identification of eth-nic groups in archaeology, archaeology of religion, archaeological reflections of commerce and trade and their influence on social development, ar-chaeology of language dispersal, cultural contact and nature of cultural “influence.” Letter grading.

217. Explanation of Societal Change. (4) Lecture, three hours. Examination of processes of societal evolution, emphasizing usefulness of variety of expla-natory models from general systems theory, ecolo-gy, anthropology, and other sources. Specific re-search questions vary with each course offering. May be repeated for credit. S/U or letter grading.

217A. Archaeology of Urbanism. (4) Seminar, three hours. Evidence of cities as most complex form of human population center, using both archaeological and modern examples. Observations about material culture and spatial assessment of social dy-namics as cities are constructed and lived in by vari-ety of different ethnic, economic, ritual, and political groups. Letter grading.

218. Style and Ethnicity. (4) Seminar, three hours. How stylistic paradigms function in and mediate shape, boundaries, and interrelations of ethnic groups. Aimed primarily toward archaeologists and ethnographers, seminar also welcomes students specifically interested in either material culture or style as such. Letter grading.


Biological Anthropology

220. Current Problems in Biological Anthropology. (4) Seminar, three hours. Detailed examination of cur-rent research in biological anthropology (specific top-ics to be announced). Emphasis on nature of hypoth-eses and their testing in ongoing student and faculty research. May be repeated for credit. S/U or letter grading.


222. Graduate Core Seminar: Biological Anthro-pology in Review. (4) Seminar, three hours. Graduate core course in biological anthropology. Topics include evolutionary theory, behavior of nonhuman primates, hominid evolutionary history, and contemporary hu-man variation. Letter grading.

Cultural Anthropology


230Q. Theories of Culture. (4) Lecture, three hours. Exploration of practical theory: emergence of culture with modes of production, discovery of culture, and “cultural capital” and cultural change. Investigation of production of culture and transfor-mations 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 isomorphic logic (as opposed to causal one) are among questions to be selected for analysis and dis-cussion. May be repeated for credit. S/U or letter grading.

233Q. Aesthetic Anthropology. (4) Lecture, three hours. Requisite: course 133R. Selected questions concerning visual aesthetic phenomena in their rela-tionship with sociocultural 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. Examin-ation of theoretical assumptions and debates that animate visual anthropology, very broadly defined, in-cluding issues of interpretation, production, and re-ception of visual media, which includes ethnographic, documentary, and feature films, as well as television programs. S/U or letter grading.

233T. Ethnographies of Information Technology. (4) Seminar, three hours. Emerging work on new infor-mation economy, with emphasis on ethnography. Readings of anthropological work and materials from range of disciplines, sociology, geography, urban studies, and management studies. S/U or letter grading.

234. Seminar: Psychocultural Studies and Medical Anthropology. (4) Seminar, three hours. Devoted to promotion of research on medical anthropology. Survey of work in child development and socialization, personality, psychobiology, transcultural psychiatry, deviance, learning, perception, cognition, and psy-chocultural perspectives on change. S/U or letter grading.

234P. Transcultural Psychiatry. (4) (Same as Psy-chiatry M222.) Lecture, three hours. Consideration of psychiatric topics in cross-cultural perspective, such as drug use, suicide, schizophrenia, behavioral disorders, “culture specific” syndromes, non-Western psychiatries, and questions of “sick” societ-ies. May be repeated for credit. S/U or letter grading.

234Q. Psychological Anthropology. (4) (Same as Psychiatry M272.) Lecture, three hours. Various psy-chological issues in anthropology, both theoretical and methodological. Areas of interest include such things as culture and theory, culture and personality, and culture psychiatry. Discussion of questions relat-ing to symbolic and unconsciousness process as they relate to culture. Topics vary from term to term. May be repeated 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 pre-vailing implicit acceptance of theoretical separation between study of mind and study of culture. S/U or letter grading.

234T. Anthropological Perspectives on Human Body. (2 to 4) (Same as Psychiatry M282.) Seminar, three hours. Exploration of how sociocultural and po-litical dynamics shape perceptions of and understand-ings about human body, and how, reciprocally, those perceptions and understandings influence so-cial processes. Includes work from both non-Western and Western societies. Letter grading.


236P. Cross-Cultural Studies of Socialization and Children. (4) (Same as Psychiatry M214.) Lecture, three hours. Selected topics in cross-cultural study of socialization and child training. Methods, ethnographic data, and theoretical orientations. Em-phasis on current research. S/U or letter grading.


239P. Selected Topics in Field Ethnography. (4 to 8) Seminar, three hours. Discussion and practicum in various techniques for collecting and analyzing ethnographic field data. S/U or letter grading.

Linguistic Anthropology


241. Topics in Linguistic Anthropology. (4) (Same as Linguistics M246C.) Lecture, three hours. Pro-blems in relations of language, culture, and society. May be repeated for credit. S/U or letter grading.

242. Ethnography of Communication. (4) (Same as Applied Linguistics M207.) Lecture, three hours. Designed for graduate students. Seminar devoted to examining representative scholarship from various fields of sociolinguistics and ethnography of communication. Particular attention to theoretical developments in-cluding relationship of ethnography of communication to such disciplines as anthropology, linguistics, and sociology. Topical to include style and strategy.

243. Seminar: Psychocultural Studies and Medical Anthropology. (4) Seminar, three hours. Devoted to promotion of research on medical anthro-opology. Survey of work in child development and socialization, personality, psychobiology, transcultural psychiatry, deviance, learning, perception, cognition, and psychocultural perspectives on change. S/U or letter grading.
speech variation, varieties of noncasual speech genres, languages and ethnicity, and nonverbal communication.

243A. Language Ideologies: Political Economy of Language Beliefs and Practices. (4) Lecture, three hours. Language ideological research problematizes fundamental assumptions about speakers’ use of language and communicative practices: (1) speakers’ awareness of these structures and processes and (2) relationship of this consciousness to speakers’ political economic perspectives and to actual communicative conduct. S/U or letter grading.

C243P. Native American Languages and Cultures. (4) Lecture, three hours; seminar, two hours. Preparation: prior coursework in either anthropology, linguistics, or American Indian studies. Introduction and comparative analysis of sociocultural aspects of language use in Native North American Indian speech communities. Specific foci include both micro- and macro-sociolinguistic topics. Micro-sociolinguistic topics are comprised of such issues as: multilingualism, cultural differences regarding appropriate communicative behavior and variation within speech communities (e.g., male and female speech, baby talk, ceremonial speech, etc.). Macro-sociolinguistic considerations include language contact and its relationship to language change and language in American Indian education. Concurrently scheduled with course C144. S/U or letter grading.

M243Q. Afro-American Sociolinguistics: Black English. (4) (Same as Afro-American Studies M200D.) 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 genesis, maintenance, and social functions. General problems and issues in fields of sociolinguistics, phonetics, phonology, syntax, and semantics are studied through case study approach. Students required to conduct research in consultation with instructor and participate in group discussion. S/U or letter grading.

244. Field Methods in Linguistic Anthropology. (4) Seminar, three hours; work with informant, one hour. Requisite: Linguistics 20 or prior experience in linguistic analysis. Practice in eliciting and transcribing linguistic data from native informants. Initial focus on phonetic transcription and phonological structures; introduction to skills and strategies pertinent to morphological, syntactic, and pragmatic analysis. Practice with native speakers of non-Indo-European languages as important aspect of student participation. S/U or letter grading.

245. Linguistic and Intracultural Variation. (4) Lecture, three hours. Problem of variation as it impinges on disciplines of anthropology and linguistics. Among objectives of course are the following: (a) to acknowledge importance of speech variation in anthropological linguistics research, to critically assess broad and representative sample of modern scholarship devoted to study of intra-individual and interindividual variation, and to evaluate utility and potential applicability of recent linguistic models to anthropological linguistics and anthropological theory. Letter grading.


M246B. Grammar and Discourse Practicum. (4) (Same as Applied Linguistics M273.) Seminar, four hours. Requisite: course M246A. Survey of advanced topics in grammatical and discourse analysis, including grammatical and indexical categories, referential and social indexicality, relation of syntax to semantics and pragmatics, markedness, universals, cultural and cognitive implications of language structure and use. S/U or letter grading.

M247. Topics in Semantics and Pragmatics. (4) (Same as Applied Linguistics M268.) Seminar, four hours. Exploration of specialized topics in semantics and pragmatics. Topics vary from year to year and may include metaphor, theories of reference and denotation, honorific speech, evidentiality, reported speech, etc. May be repeated for credit with topic change. Letter grading.


M249A-M249B. Ethnographic Methods in Language, Interaction, and Culture I, II. (4-4) (Same as Applied Linguistics M270.) Hands-on mentorship in editing ethnographic analysis, including how to produce analysis in form of grant or dissertation proposal. S/U or letter grading.

M249P. Ethnographic Technologies Laboratory I. (4) (Same as Applied Linguistics M270P.) Laboratory, four hours. Corequisite: course M249A or Applied Linguistics M270A. Hands-on mentorship in entering linguistic data from native informants. Initial focus on phonetic transcription and phonological structures; incorporation of video frame grabs into transcription and analysis of verbal interaction, writing grant proposals, and presenting conference papers. S/U or letter grading.

M249Q. Ethnographic Technologies Laboratory II. (4) (Same as Applied Linguistics M270Q.) Laboratory, four hours. Corequisite: course M249B or Applied Linguistics M270B. Hands-on mentorship in editing ethnographic video footage, incorporating video frame grabs into transcript and analysis of verbal interaction, writing grant proposals, and presenting conference papers. S/U or letter grading.

Social Anthropology


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 structural social inequality based on rank, class, caste, ethnicity, gender, age, sexual preference, disability, etc., to develop unified theory of social inequality. Examples from Asian, Pacific, European, African, and American contexts. 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. Examination of recent works in anthropology and other disciplines that address resistance 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 pass-

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 anthropology 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 misunderstanding, in 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 to 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 in economy and occupational structure based on manufacturing to one based on services. Shift has been accompanied by increasing polarization of jobs by class, with stratified society at top and poverty-level wages at bottom, with loss of middle-income jobs, leaving U.S. as society increasingly 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.

Applied Anthropology


M263P. Gender Systems. (4) (Same as Gender Studies M263P.) Seminar, three hours. Current theoretical developments in understanding gender systems cross-culturally, with emphasis on relationship between gender categories, gender, economy, ideational systems, and social inequality. Selection of ethnographic cases from recent literature. S/U or letter grading.

M263Q. 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 interpersonal relationships 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.

M264. Latin America: Traditional Medicine, Shamanism, and Folk Illness. (4) (Same as Community Health Sciences M264 and Latin American Studies M26.) Lecture, three hours. Recommended preparation: Community Health Sciences 132, bilingual English/Spanish skills. Examination of role of traditional medicine and shamanism in health and exploration of how indigenous and mestizo groups diagnosed and treated folk illness and Western-defined dis-
M265. Anthropology of Genetic Knowledge. (2 to 4) (Same as Psychiatry M283.) Seminar, three hours. Recommended for graduate students. Survey of selected literature and current developments in field of Chinese social-cultural anthropology. 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.

M266. Health and Culture in America. (4) (Same as Community Health Sciences M260 and Latin American Studies M260.) Lecture, three hours. Required for graduate students. Exploration of how sociocultural and political dynamics shape our understandings of genetic discoveries and how genetic information is used to create conceptions of self and society. Letter grading.

M268R. Repatriation of Native American Human Remains. (4) (Same as American Indian Studies M268R.) 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), including cultural, political, and economic aspects of changing historical context. Concurrently scheduled with course CM168P. S/U or letter grading.


M269P. Politics of Reproduction. (2 to 4) (Same as Psychiatry M280.) Seminar, three hours. Examination of various ways that power, as it is structured and enacted in everyday activities, shapes human reproductive behavior. Readings address how reproductive behaviors reflect and reinforce cultural, ecological, and demographic evolutionary and other theoretical foci. S/U or letter grading.

M269R. 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 and state laws repatriating human remains and cultural objects to them. Examination of this phenomenon. Concurrently scheduled with course C169R. Letter grading.

Regional Cultures

271. Contemporary Problems in Africa. (4) Seminar, three hours. Problemsatic issues in Africa in light of classical anthropological literature and recent work by anthropologists working in the area. Case studies from eastern and southern Africa. S/U or letter grading.

M272. Indians of South America. (4) (Same as Latin American Studies M250A.) Lecture, three hours. Survey of literary and critical texts related to Indian cultures of South America. May be repeated for credit. S/U or letter grading.

M273. Cultures of Middle East. (4) Seminar, three hours. Survey of literature and problems of various cultures of Middle East. S/U or letter grading.

M276. Japan in Age of Empire. (4) (Same as Asian M292 and History M286.) Seminar, three hours. Described as a “19th-century Europe,” 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.

277. Anthropology of China. (4) Seminar, three hours. Designed for graduate students. Survey of selected literature and current developments in field of Chinese social-cultural anthropology. 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 with no prior experience in anthropology among sciences and resulting problems for scientific research design. Review of typical research problems and appropriate methods. Students will be divided into groups 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.

M284. Qualitative Research Methodology. (4) (Same as Community Health Sciences M216.) Discussion, three hours; laboratory, one hour. Intensive seminar/field course in qualitative research methodology. Emphasis on using qualitative methods and techniques in research and evaluation related to healthcare. Letter grading.

M284P. Anthropological Methods and Data Analysis. (4) Seminar, three hours. Designed to graduate students. Recommended preparation: research design course. Hands-on approach to qualitative methods used in anthropological research and techniques for analysis and quality. Qualitative methods depend on and are appropriate to research questions and designs students bring to class. S/U or letter grading.

M285. 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. Archaeologists from all departments are welcome, as students interested in history or philosophy of science. Letter grading.

285P. Selected Topics in Anthropological Archaeology. (4) Seminar, three hours. Designed for graduate students. Variable topics course on important theoretical topics in archaeological anthropology. Topics include early village societies, specialization 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 simulations and/or models to specific problems related to anthropological problems. For instance, computer models are applied to human ecology, demographic, evolutionary, and other theoretical foci. S/U or letter grading.

287. Poststructural Theories. (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, nature, ethnographic reports, reflexivity, politics of representation, historicity, and study of self, identity, and body. S/U or letter grading.

287P. Anthropology and Colonialism. (4) Lecture, three hours. Designed for graduate students. Exploration of multifaceted nature of colonialism and its cultural manifestations in variety of geographical areas. Reconsideration of history of anthropology for, as Talal Asad argues, “anthropology emerged as distinctive discipline at beginning of colonial era.” S/U or letter grading.

M287Q. Native American Historical Demography. (4) (Same as History M260D) Lecture, two hours; discussion, one hour. Examination of population history of and its relevance for anthropological research. Exploration of problem of intersubjectivity in its exis-
tential, semiotic, and linguistic dimensions. Key topics include intentionalty, consciousness, empathy, temporality, agency, experience, and embodiment. S/U or letter 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 supervision of regular faculty member responsible for curriculum and instruction at UCLA. May be repeated for credit. S/U 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

College of Letters and Science

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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 interactive contexts, language is essential to all aspects of life from personal to social. Interdisciplinary in nature, applied linguistics sheds 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 Department 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. degrees, as well as one undergraduate minor and a graduate certificate program.

Undergraduate Study

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://www.admissions.ucla.edu/prospect/admn.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 M167, 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, C140, M146, 170, Political Science 151A, 151B, 151C, Linguistics 165A or 165B (or 203A 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 80 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](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 as follows:


- Applied Linguistics 121SL, 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 195, 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 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 requirements or another minor, and at least 16 units applied toward the minor must be taken in residence at UCLA. Transfer credit for any of the above is subject to departmental approval; consult 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 the Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website, [http://grad.ucla.edu/gasasa/library/pgmreqintro.htm](http://grad.ucla.edu/gasasa/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 Graduate Council of the UCLA Academic Senate voted to temporarily rescind the admissions suspension for the Applied Linguistics C,Phil, and Ph.D. degrees effective Fall Quarter 2013.

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. A Teaching English as a Second/Foreign Language Certificate is also offered; however, admissions were 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 requisites: courses 1A, 1B. 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, nonprofits, and religious work, speak about study of Africa and careers they have pursued after studying about Africa in college and/or graduate school. P/NP grading.

7A-7B-7C. **Elementary Zulu.** (4-4-4) Lecture, five hours. Course 7A is enforced requisite to 7B, which is enforced requisite to 7C. Most widely spoken of the Nguni languages of South Africa, mutually intelligible with other members of this group. P/NP or letter grading.

8A-8B-8C. **Intermediate Zulu.** (4-4-4) Lecture, four hours. Enforced requisite: course 7C. Course 8A is enforced requisite to 8B, which is enforced requisite to 8C. P/NP or letter grading.

11A-11B-11C. **Elementary Yoruba.** (4-4-4) Lecture, five hours. Course 11A is enforced requisite to 11B, which is enforced requisite to 11C. Major language of western Nigeria. P/NP or letter grading.

12A-12B-12C. **Intermediate Yoruba.** (4-4-4) Lecture, four hours. Enforced requisite: course 11C. Course 12A is enforced requisite to 12B, which is enforced requisite to 12C. P/NP or letter grading.

14A-14B-14C. **Intermediate Igbo.** (4-4-4) Seminar, four hours. Enforced requisite: course 55. Course 14A is enforced requisite to 14B, which is enforced requisite to 14C. Major language of Etreeta and Tigray, province of Ethiopia. Reading, writing, oral, and aural skills at intermediate level. P/NP or letter grading.

15. **Intensive Elementary Swahili.** (12) Lecture, 20 hours (eight weeks). Intensive instruction (equivalent to courses 1A, 1B, 1C) in Swahili, major language of East Africa, particularly Tanzania. Letter 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 (Malinké), Dyula, and other mutually intelligible dialects. P/NP or letter grading.
Upper Division Courses

103A-103B-103C. Advanced Swahili. (4-4-4) Lecture, four hours. Required: 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. Required: 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 123B, 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. Required: course 32C. Course 133A is requisite to 133B, which is requisite to 133C. 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). Enforced 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.


171. Language in South Africa: Histories, Cultures, Politics. (4) Lecture, three hours. Recommended requisite: course 109A. Knowledge of African languages required. Introduction to South Africa centered around language, using variety of disciplinary perspectives as lenses to examine variegated landscape of South Africa's languages. How does 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 languages not required. Introduction to Nige- ria centered around language, shape ethnic identities in Nigeria (one of Africa’s most multilingual nations) and Nigerian diaspora? Analysis of historical, cultural, political, and linguistic circumstances allows discussion of language interaction such as contemporary poli- tics, religion, literature, and performing arts and to gain in-depth understanding of Nigeria’s diversity of languages and cultures, with focus on four major lan- guages: Hausa, Igbo, Yoruba, and Nigerian Pidgin En- glish. P/NP or letter grading.

173. Preparing to Study abroad in Africa. (4) Lecture, three hours; discussion, on course. Recommended preparation: one year of one African language. De- velopment of skills, perspectives, and practical knowledge about living and studying abroad, with particular reference to Africa and greater emphasis on those African countries that host 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 natural/cultural values and their role in how one views other cultures, culture shock and stages of cross-cultural adjust- ment, language teaching and learning, and non-verbal patterns of communication, and African aca- demic 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 intensive instruction at advanced level or su- pervised research, based on needs of individual stu- dents. In any language(s) 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 repeat- ed for credit. Individual contract required. P/NP or let- ter grading.

Graduate Courses

204A-204B-204C. Comparative Bantu. (4-4-4) Lecture, four hours. Required: Linguistics 110, 165A, 165B. Recommended: three quarter courses in one Bantu language selected from 1A through 8C. Investig- ation of relationships among Bantu languages; extent and external relationships of Bantu. S/U or let- ter grading.

596. Directed Studies. (1 to 8) Tutorial, to be ar- ranged. Directed individual study or research. Four units may be applied toward M.A. course require- ments. May be repeated for credit. S/U grading.
placing students into language programs, screening potential citizens, and selecting employees. But how useful are one language tests for making these decisions? By what standards can usefulness of these tests and fairness of decisions that are made be evaluated? What are consequences, both beneficial and harmful, of using language tests for these purposes? In this section we overview several related articles that address these questions. Letter grading.

30W. Language and Social Interaction. (5) Lecture, three hours; discussion, two hours. Enforced requisite: English Composition 3 or SH or English as a Second Language 36. Not open for credit to students with credit for course 30, Exploration of range of topics related to study of language and society, particularly how language affects social lives and how social organization affects use of language. Topics include different approaches to study of language in sociolinguistic research. Topics explored include, but are not limited to, language and social structure, language and social interaction (theories and research methodologies), issues regarding language and identity (such as socioeconomic status, race, gender, and situational identity), and issues concerning language and culture (such as cross-cultural misunderstanding and language socialization). Empirical and critical analysis of set of language data to be carried out as part of course project. Letter grading.

30W. Language and Social Interaction, Second. (5) Lecture, three hours; discussion, two hours. Enforced requisite: English Composition 3 or SH or English as a Second Language 36. Not open for credit to students with credit for course 30, Exploration of range of topics related to study of language and society, particularly how language affects social lives and how social organization affects use of language. Topics include different approaches to study of language in sociolinguistic research. Topics explored include, but are not limited to, language and social structure, language and social interaction (theories and research methodologies), issues regarding language and identity (such as socioeconomic status, race, gender, and situational identity), and issues concerning language and culture (such as cross-cultural misunderstanding and language socialization). Satisfies Writing II requirement. Letter grading.

40. Language and Gender: Introduction to Gender Differences and Stereotypes. (5) Lecture, four hours; discussion, one hour. Not open for credit to students with credit for course 40W or former course M40 or M40W. Introduction to language from sociolinguistic 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 lexic, language behavior, phonetics and intonation, and language acquisition and linguistic change. Fieldwork to be carried out in language of student choice. Letter grading.

40W. Language and Gender: Introduction to Gender Differences and Stereotypes. (5) Lecture, four hours; discussion, two hours. Enforced requisite: English Composition 3 or SH or English as a Second Language 36. Not open for credit to students with credit for course 40 or former course M40 or M40W. Prior knowledge of foreign language not required. Introduction to language from sociolinguistic 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 lexic, 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. (5) Lecture, four hours; discussion, one hour. Enforced requisite: English Composition 3 or SH or English as a Second Language 36. Not open for credit to students with credit for course 80. 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 communication. Discussion 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 are made relevant in everyday life by looking at second language interaction on various social occasions. Discussion of second language interaction in various pedagogical settings. P/NP or letter grading.

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, register and genre construction, language in cultural settings, language socialization, and language impairment and institutional discourse. Focus on analysis of audio and video recordings of talk in various of natural settings. P/NP or letter grading.

101W. Introduction to Language Learning and Language Teaching. (5) Lecture, four hours; discussion, one hour. 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 requisite: English Composition 3 or SH or English as a Second Language 36. Not open for credit to students with credit for course 101. 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. Satisfies Writing II requirement. Letter grading.

102W. Nature of Learning. (5) Lecture, four hours; discussion, one hour. Enforced requisite: English Composition 3 or SH 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) early in life. Success in second language acquisition is radically 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 aptitude and motivation in learning. Primary vehicle for investigation is autobiographies of second language learners. Satisfies Writing II requirement. Letter grading.


C111. Writing for Second/Foreign/Heritage Lan- guage Education. (4) Lecture, four hours. Requisite: course 101W or C110. Survey of theoretical and methodological issues related to second/foreign language written discourse and composition for second/foreign herit- age language writers, 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.

C112. Reading for Second/Foreign/Heritage Lan- guage Education. (4) Lecture, four hours. Requisite: course 101W or C110. Survey of theoretical and methodological issues related to second/foreign language reading, including critical examination of reading research and evaluation of research para- digms and classroom materials. Concurrently sched- uled with course C212. P/NP or letter grading.

112SL. Teaching Reading in Second/Foreign/Heri- tage Language through Service Learning. (5) Lecture, four hours; fieldwork, four hours. Designed for second/foreign language teachers and institutions with students in service-learning programs. Integrates student teachers-in-training, with focus on important theoreti- cal and methodological issues related to teaching of second language reading. Survey of current research and theory, as well as evaluation of current reading textbooks 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 work goals of relating their experiences to classroom mate- rials and ensuring mutually beneficial relationship between academic and community partners. 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. Examination of (1) segmental and supra-segmental features of NAE, (2) how English sound system contrasts with sound systems of other languages, (3) activities for teaching pronunciation, and (4) current materials for teaching pronunciation (textbooks, videotapes, computer software, Internet resources). Students gain experience in teaching pronunciation while providing valuable and meaningful service to community partners who want help with teaching pronunciation. Concurrently scheduled with course C214. 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 acoustical principles, phonological paradigms and classroom materials. Concurrently scheduled with course C214. P/NP or letter grading.

C115A. Media for Second/Foreign/Heritage Lan- guage Education. (4) Lecture, four hours. Requisite: course 101W or C110. Rationale and pedagogical ap- plication for using media equipment and materials in second/foreign/heritage language classroom. Training in standard classroom media equipment operation,
basic materials preparation, and production tech-
niques, and review of published media materials, with focus on 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: courses 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 classroom, class) and 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 C215B. Letter grading.


117SL. 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 and the service to relate their experiences to course material and ensure mutually beneficial relationship between academic and community partners. Design of integrated skills unit that draws on students' background knowledge and specific interests and issues raised during service. Course projects may focus on ESL/EFL or English as a foreign/heritage language instruction. P/NP or letter grading.

C118A. Fundamentals of Second/Foreign/Heritage Language Teaching. (4) Seminar, four hours. Requi-
site: course 101W or C110. Designed for students interested in microcomponents of effective second/foreign/heritage language teaching. In-depth examination of decision-making process underlying planning and implementation of lessons. Provides structured environment in which to hone fundamental teaching skills such as conducting warm-up activities, managing classroom dynamics, eliciting student contributions, correcting errors, sequencing lesson components, and transitioning between them. Concurrently scheduled with course C115B. 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. Emphasis on fieldwork experiences and grounding of solutions to problems faced in current research in language education and language pedagogy. Concurrently scheduled with course C218B. P/NP or letter grading.

C119A-C119B. Current Issues in Second/Foreign/Heritage Language Education. (4-2) Requisite: courses 101W or C110. Discussion of current topics in language education. Emphasis varies according to current topics of theoretical concern in field of second/foreign/heritage language education. May be repeated for credit with topic change. Concurrently scheduled with courses C221 or C222. Letter grading.

C119A. Seminar, four hours; C119B. Seminar, two hours.

M121SL. Oral History: Latino New Immigrant Youth. (6) Formerly numbered 1218L. (Same as Chicana and Chicano Studies M164SL) Lecture, two hours; tutorial, two and one half hours. Theory, meth-
odology, 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 M172.) Lecture or Experiential Seminar. Emphasizes 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. Examina-
tion of ways in which metaphor, metonymy, and metacausality are structured linguistically and culturally. Letter grading.

CM127. Animal Communication. (5) (Same as Anthro-

CM128. Teaching and Learning of Heritage Lan-
guages. (4) Same as Slaveic CM114.) Lecture, three hours. Consideration of issues relevant to heritage language learners (HLL) and to heritage language (HL) instruction. Readings and discussion on such topics as definitions, historical perspectives, and perspectives on HL education; linguistic, demographic, sociolinguistic, and sociocultural profile of HLLs, particularly HL groups most represented among UCLA students; institutional and instructor at-
titudes toward student-initiated fieldwork; motivations and expectations on HL curriculum and teaching ap-
proaches; 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 in-
struction of mixed HL and FL classes. Action research component included. Concurrently scheduled with course CM228. P/NP or letter grading.

M131. Alternative Approaches to Language Acqui-
sition. (4) (Same as Disability Studies M131.) Semi-
inar, four hours. Examination of everyday experience of language delay, disorder, difference, and difficulty from disability studies perspective. Presentation of key concepts and terminology of culture, disability, and language. Enforced requisite: English Composition 13 or 3H or English as a Second Language 165SL. Requisite: Seminar, four hours. Required. Concurrently scheduled with course C204. Letter grading.

M131. Alternative Approaches to Language Acquisi-
tion. (4) (Same as Disability Studies M131.) Semi-
inar, four hours. Examination of everyday experience of language delay, disorder, difference, and difficulty from disability studies perspective. Presentation of key concepts and terminology of culture, disability, and language. Enforced requisite: English Composition 13 or 3H or English as a Second Language 165SL. Requisite: Seminar, four hours. Required. Concurrently scheduled with course C204. Letter grading.

M132. (Same as Disability Studies M132.) Seminar, four hours. Study of various topics related to literacy, including different definitions of literacy, programs for adult pre-
literates, literacy and gender, approaches to literacy (whole language, phonics, Freire's liberation pedagogy), history of writing systems, phoneme as basis for alphabet, history and national literacy campaigns. Required field project involving Spanish adults in adult literacy programs. P/NP or letter grading.

C141. Analysis and Use of Language Assessment Data. (4) Seminar, four hours. Enforced requisite: course C157. Collection, analysis, and use of data from language assessment procedures. Topics include collecting feedback, descriptive statistics, quan-
titative data reduction techniques, item analysis and approaches to estimation of reliability and to valida-

C153. Functional Foundations of Language. (4) Seminar, four hours. Requisite: Linguistics 20. Intro-
duction to analysis and description of form, meaning, and function of structures (morphological and syntac-
tic), lexical items, and linguistic features of discourse. Exploration of variety of approaches integrating form, meaning, and function. Concurrently scheduled with course C201. Letter grading.

C155. Foundations of Language Acquisition. (4) Seminar, four hours. Requisite: Linguistics 20. Intro-
duction to theoretical and empirical research in lan-
guage acquisition and second language acquisition. Linguistic nature of learners' cognitive systems, and underlying cognitive mechanisms posited to ex-
plain them, as well as various social, affective, cogni-

C157. Foundations of Language Assessment. (4) Seminar, four hours. Conceptual foundations of lan-
guage assessment, including nature of language abili-
ity, nature of measurement, uses of language assess-
ment in research, types and characteristics of assess-

M161W. Talk and Body. (5) (Same as Anthropology M168W and Communication Studies M123W.) Lec-
ture, four hours; discussion, one hour. Enforced requi-
site: English Composition 3 or 3H or English as a Sec-
ond 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 iso-
lated entity, but as visible agent whose talk and action are lodged in both processes of human interac-
tion and rich settings where people pursue courses of action, express identities in and through their lives. Satisfies Writing II re-
quirement. Letter grading.

M165SL. Taking It to Street: Spanish in Community. (5) (Same as Spanish M165SL.) Seminar, three hours; fieldwork, two hours. Enforced requisite: Spanish 25 or 27. Service learning course provides opportunity to use cultural and linguistic knowledge acquired in Spanish classes in real-world settings. Students re-
quired to spend minimum of eight to 10 hours per week at 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 re-
cording and analyzing communicative events and practices in their sociocultural context, involving stu-
dent-initiated fieldwork in community settings. Em-
phasis on hands-on activities within theoretical frame-
work that considers language as social and cultural practice. Letter grading.

M172SL. Latinos, Linguistics, and Literacy. (5) (Same as Chicana and Chicano Studies M710SL, Honors Collegium M182SL, and Spanish M172SL.) Seminar, four hours; fieldwork, five hours. Enforced requisite: Spanish 100A. In-depth study of various topics related to literacy, including different definitions of literacy, programs for adult pre-
literates, literacy and gender, approaches to literacy (whole language, phonics, Freire's liberation pedagogy), history of writing systems, phoneme as basis for alphabet, writing, and national literacy campaigns. Required field project involving Spanish adults in adult literacy programs. P/NP or letter grading.

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C175. Critical Approaches to Multilingualism. (5) Seminar, four hours. Examination of how identities and social histories of individuals influence their lives and behaviors 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 colonial and postcolonial language policies (politics and ideologies) in verbal arts, media, education, government, and everyday conversation. How might critical applied linguistics in general, and post- colonial theories contribute to better understanding of politics of language use in multilingual contexts? Concurrently scheduled with course C275. P/NP or letter grading.

M179. Language Politics and Policies in U.S.: Comparative Perspectives (as Chicana and Chicano Studies M179). Lecture, four hours. Historical survey of language policies and language groups in U.S. as context to understanding social, legal, and political constraints on bilingualism. Review of federal, state, and institutional language policies and politics, with focus on schooling, administration of government, justice, and workplace. P/NP or letter grading.

195. Community Internships in Applied Linguistics and TESL. (3) 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 practical experience and research report. Hours may be repeated for credit. Individual contract required; see undergraduate student adviser. Letter grading.

196. Honors Research in Applied Linguistics and TESL. (4) Tutorial, four hours. Limited to juniors/seniors. Individual intensive study for undergraduate students who desire more advanced or specialized treatment of issues in a major field. Hours assigned to each student at discretion of instructor. May be repeated for credit. Individual contract required; see undergraduate student adviser. Letter grading.

197. Directed Research in Applied Linguistics and TESL. (4) Tutorial, four hours. Limited to seniors. Research project under the direct supervision of a faculty member. May be repeated for credit. Individual contract required. Letter grading.

Graduate Courses


C202. Foundations of Language Acquisition. (4) Seminar, four hours. Requisite: Linguistics 20. Introduction to theoretical and empirical research in language acquisition and second language acquisition. Linguistic nature of learners, interlanguage systems, and underlying cognitive mechanisms posited to explain them, as well as various social, affective, cognitive, and neurobiological factors that affect ultimate success of learner. Concurrently scheduled with course C155. Letter grading.


M207. Ethnography of Communication. (4) (Same as Anthropology M242.) Lecture, three hours. Designed 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 foci include style and strategy, speech varia- tion and gender, language politics, languages and ethnicity, and nonverbal communication behavior. S/U or letter grading.

208. Foundations of Discourse Analysis. (4) Seminar, four hours. Survey course to introduce basic tenets of discourse analysis, including discourse analysis and syntax, planned and unplanned discourse, conversational analysis, analysis of speech events, unequal power discourse, and analysis of classroom discourse. Letter grading.

199. 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. Topics include epistemology for applied linguists, nature of language, symbolic and physical worlds and causality in applied linguistics research, critical applied linguistics, and methodologies for research in applied linguistics. Discussion of 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 comprising code-switching for second/ heritage language writers, including critical examination of classroom research and overview of issues in evaluation of second/foreign/heritage languages. Pre-requisite: concurrently scheduled with course C111. Additional assignments required of graduate students. S/U or letter grading.

C212. 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 reading research and evaluation of research paradigms and classroom materials. Concurrently scheduled with course C112. Additional assignments required of graduate students. S/U or letter grading.

C213. Phonetics for Second/Foreign/Heritage Language Education. (4) Laboratory, four hours. Requisite: Linguistics 20. Examination of phonological structure of contemporary American English, with emphasis on appropriate teaching techniques in ESL/ EFL/heritage settings, including critical examination of classroom materials and various methods of evaluating student pronunciation. Concurrently scheduled with course C113. Additional assignments required of graduate students. S/U or letter grading.


C215B. Computer-Enhanced Language Teaching and Learning. (4) Seminar, four hours; fieldwork, four hours. Requisite: course C210. Designed for students interested in computer-enhanced language teaching 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 files (Excel grade calculations), and creating electronic teaching portfolios, with focus on pedagogical rationale for classroom instruction and professional development in 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 intended teaching settings/populations. Concurrently scheduled with course C115B. Letter grading.


C218A. Fundamentals of Second/Foreign/Heritage Language Teaching. (4) Seminar, four hours. Requisite: course C210. Designed for students interested in microcomponents of effective second/foreign/heritage language teaching. In-depth examination of decision-making process underlying planning and implementation of lessons. Preparation of classroom environment in which to hone fundamental teaching skills such as conducting warm-up activities, managing student dynamics, eliciting student contributions, correcting mistakes, setting of classroom codes, and transitioning between them. Concurrently scheduled with course C118A. S/U or letter grading.

C218B. Second/Foreign/Heritage Language Teaching Practicum. (4) Seminar, three hours; fieldwork, one hour. Requisite: course C210. Designed to give classroom teaching experience in second/foreign/heritage language teaching. 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 C118B. S/U or letter grading.


223. 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, types and theories of bilingualism, learning theories and their influence on language teaching. May be repeated for credit with topic change. Letter grading.

224. Language Socialization. (4) (Same as Anthropology M246.) Seminar, four hours. Requisite: course M206. 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 socio-economic groups. Ways in which verbal interaction between novices and experts is structured linguistically and culturally. S/U or letter grading.

225A-S225B. Seminars: Corpus Linguistics. (4-4) (Same as As Asian M222A-M222B.) Seminar, three hours. Construction and exploitation of computerized language corpora for studying issues in areas such as lexicology, sociolinguistics, language variation, language learning and teaching. Discussion of special issues in working with East Asian language corpora. In Progress (M225A) and S/U or letter (M225B) grading.

226. Teaching and Learning of Heritage Languages. (4) (Same as Slavic CM214.) Lecture, three hours. Consideration of issues relevant to heritage language learners (HLL) and to heritage language (HL) instruction. Readings and discussion on such topics as definitions of HLs and HLLs; linguistic, demographic, sociolinguistic, and sociocultural profile of HLs, 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 approach; approaches to heritage language instruction and to foreign language learners (FLs) regarding teaching methods and materials; diagnostic testing and needs analysis; use of oral/aural proficiency as springboard for literacy instruction; optimization of instruction of mixed HL and FL classes. Action research component included. Concurrently scheduled with course CM126. S/U or letter grading.

227. Current Issues in Language Acquisition. (4) Seminar, four hours. Enforced requisite: course C202. Designed to explore current issues in language acquisition from both theoretical and applied research perspectives and to provide actual experience in addressing current topic. Specific topics vary according to trends in field. Specific topics may be repeated for credit with topic change. Letter grading.

230. Advanced Seminar: Interlanguage Analysis. (4) Seminar, four hours. Requisite: course 220. Analysis of interlanguage from various points of view (e.g., topics: context, tense, aspect, mood, modality, thematic structure of utterances), with aim of understanding how interlanguage is organized. Original research projects. May be repeated for credit with topic change. Letter grading.

231. Crosslinguistic Topics in Language Acquisition. (4) Seminar, four hours. Requisite: course 220. Advanced seminar on language acquisition in which one particular linguistics topic (e.g., development of tense/aspect, reference, subordination, agreement) is pursued from crosslinguistic and cross-disciplinary perspectives. Focus on language-specific versus universal (i.e., crosslinguistically valid) mechanisms of language development. May be repeated for credit with topic change. Letter grading.


233. Topics in Function Grammar. (4) (Same as Anthropology M293S, Education M286, Neuroscience M294, 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 ontogeny and human phylogeny. S/U or letter grading.

238. Neurobiology of Language and Learning Research Laboratory. (4) Laboratory, four hours; one hour of work/research, eight hours. Research in neuropsychology of language and learning, with focus on critical reading of relevant publications. Students must work toward specific program-relevant product, such as thesis, dissertation proposal, qualifying paper, dissertation, research paper, or grant proposal. May be repeated for credit with topic change. S/U or letter grading.

240. Design and Development of Language Assessment Procedures. (4) (Formerly numbered 240.) Seminar, four hours. Enforced requisite: course C204. Course is designed to provide a survey of language assessment procedures and major types of assessment procedures for different language abilities. Practical experience in design and construction of assessment procedures. Project required. Concurrently scheduled with course M225A. S/U or letter grading.

241. Analysis and Use of Language Assessment Data. (4) (Formerly numbered 241.) Seminar, four hours. Enforced requisite: course C204. Collection, analysis, and use of data from language assessment procedures. Topics include collecting feedback, descriptive statistics, qualitative data reduction techniques, item analysis and approaches to estimation of reliability and to validation of data-based interpretations. Project required. Concurrently scheduled with course C141. Letter grading.

242. Experimental Design and Statistics for Applied Linguistics. (4) Seminar, four hours. Requisite: course C204. Specialized topics of interest to graduate students in applied linguistics, with focus on design and interpretation of research projects in field. Exploration of issues in both qualitative and quantitative study design, interpretation of differences and presentation of results. Emphasis varies according to current theoretical methodological trends in field. Project required. Letter grading.

244. Seminar: Language Assessment. (4) Seminar, four hours. Requisite: course C204. Designed to explore current issues in language assessment from both theoretical and practical perspectives and to provide actual experience in addressing current issues. Specific topics vary according to trends in field. May be repeated for credit with topic change. S/U or letter grading.

250. Advanced Seminar: Language Assessment. (4) Seminar, four hours. Requisites: courses C204, C241. Designed to cover application of technical issues such as reliability, validation, criterion-referenced assessment, generalizability theory, item-response theory, or program evaluation to language assessment in depth. Specific topics vary. Project required. May be repeated for credit with topic change. S/U or letter grading.

255. Topics in Functional Grammar II: Discourse. (4) Seminar, four hours. Requisite: course C201. Specialized topics in functional grammar of interest to graduate students in applied linguistics. Emphasis varies according to current topics of theoretical import in field, such as voice, nominal reference, and word order. May be repeated for credit with topic change. S/U or letter grading.


265. Topics in Functional Grammar. (4) Seminar, four hours. Requisite: course C201. Detailed examination of specialized topics in semantics and pragmatics. Topics vary from year to year and may include metaphor, theories of reference and denotation, honorific speech, evidentiality, reported speech, etc. May be repeated for credit with topic change. Letter grading.

266. Topics in Semantics and Pragmatics. (4) (Same as Anthropology M247.) Seminar, four hours. Requisite: course C201. Detailed examination of specialized topics in semantics and pragmatics. Topics vary from year to year and may include metaphor, theories of reference and denotation, honorific speech, evidentiality, reported speech, etc. May be repeated for credit with topic change. Letter grading.

270. Talk and Body. (4) Seminar, four hours. Requisite: course M206 or M207 or 208. Investigation of organization of language and embodied action within human interaction. Use of both audio and video recordings of human interaction in variety of natural settings to examine range of phenomena, including ways in which processes of interaction between speakers and hearers are consequential for detailed organization of human social interaction frameworks, narrative as embodied multiparty activity, integration of semiotic structure in environment within organization of talk-in-interaction, and organization of aphasia. Project required. Must work toward specific program-relevant product, such as presentation of relevant data in seminar format. Letter grading.

268. Crosslinguistic Research Laboratory. (4) Laboratory, four hours. Advanced procedures in data analysis in crosslinguistic research, including critical reading of relevant publications. Students must work toward specific program-relevant product, such as...
archaeology, dissertation proposal, qualifying paper, dissertation, research paper, or grant proposal. May be repeated for credit. S/U or letter grading.

269. Current Issues in Discourse Analysis. (4) Seminar, four hours. Requisite: course M206. Specialized topics in discourse analysis of interest to graduate students in applied linguistics. Emphasis varies according to current issues. Theoretical and practical concerns in field. May be repeated for credit with topic change. Letter grading.

M270A-M270B. Ethnographic Methods in Language, Interaction, and Culture I, II. (4-4) (Same as Anthropology M249A-M249B.) Seminar, three hours; laboratory, two hours. Seminar: two-term sequence on ethnographic approaches to recording and analyzing communicative events and practices in their sociocultural context, including student-initiated fieldwork in community setting. Emphasis on first-hand activities within theoretical frameworks that consider language as social and cultural practice. M270A: requisite: course M207 or Sociolinguistics 244A. Devoted to skills related to collecting socially and culturally meaningful data. Letter grading. M270B: requisite: course M270A. Devoted to production of ethnographic analysis, including how to present and talk about data in academic settings. May develop analysis into grant or dissertation proposal. S/U or letter grading.

M270P. Ethnographic Technologies Laboratory I. (4) (Same as M249P.) Laboratory, four hours. Corequisite: course M270A or Anthropology M249A. Hands-on mentorship in entering communities, obtaining informed consent, interviewing, note taking, and videorecording verbal interaction. S/U grading.

M270Q. Ethnographic Technologies Laboratory II. (4) (Same as Anthropology M249Q.) Laboratory, four hours. Corequisite: course M270B or Anthropology M249B. Hands-on mentorship in editing ethnographic video footage, incorporating video frame grabs into transcript and analysis of verbal interaction, writing grant proposals, and assembling conference presentations. S/U grading.


M272. Grammar and Discourse. (4) (Same as Anthropology M246A.) Seminar, four hours. Requisite: course C201. Survey of grammar and discourse-based approaches to study of language as meaningful form. Topics include grammatical and discourse categories, referential, social indexicality, relation of syntax to semantics and pragmatics, markedness, universals, cultural and cognitive implications of language structure and use. S/U or letter grading.

M273. Grammar and Discourse Practicum. (4) (Same as Anthropology M246B.) Seminar, four hours. Requisite: course M272. Survey of advanced topics in grammar and discourse, including predicates, argument and grammatical relations, noun phrase categories, case marking, verbal categories, topic marking devices, registers and speech varieties, reported speech, genre and text structure in discourse. Presentation and analysis of data from range of languages. S/U or letter grading.

274. Advanced Seminar: Contextual Analysis of English Structure. (4) Seminar, four hours. Requisite: course C216. Examination of selected words and/or structures in context to detect what they mean and why they occur. Beginning with frequency and distribution of form(s), exploration of meaning and function of form(s). Letter grading.

C275. Critical Approaches to Multilingualism. (5) Seminar, three hours. Exploration 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 colonial and postcolonial language policies (polices and ideologies) in verbal arts, media, education, government, and everyday conversation. How might language play in general, and postcolonial theory in particular, help to better understand politics of language use in multilingual contexts? Concurrently scheduled with course C275. 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, three 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, legal, and economic life. Examination of nature of language and aspects of translation and interpreting across wide range of theoretical, methodological, and practical perspectives. S/U or letter grading.

289. Functional Grammar Laboratory. (4) Laboratory, four hours; fieldwork, eight weeks. Critical discussion and analysis of data that is naturally occurring, made up by participants and/or their native informants, or attested in written texts. Students trained to build hypothesis based on observable data, test it by experimenting with sentences and using native input, and generalize from their conclusions. Students provide critical linguistic correspondences of given phenomena and carry out contrastive research on discourse-pragmatic problems detected in one or another language. Emphasis on each student carrying out one particular portion of research project 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.


298. Critical Applied Linguistics Working Group. (1 to 4) Research group meeting, four hours. Requisite: course 208 or C275. Designed for Applied Linguistics M.A. and Ph.D. students. Collaborative exploration and discussion of current research and literature on critical approaches to applied linguistics, including critical discourse analysis. Development of large-scale research project (M.A. thesis, QP, or Ph.D. dissertation); conduct or review of current research, and presentation of work in progress to receive critical feedback from class participants. May be repeated for credit. S/U grading.

375. Teaching Apprentice Practicum. (1 to 4) Seminar, to be arranged. Prerequisite: M.A. or Ph.D. candidates each term they are registered and benefiting from critical feedback by fellow students. Hands-on analysis rather than reading of secondary literature. S/U grading.

599. Research for and Preparation of Ph.D. Dissertation. (4 to 16) Tutorial, to be arranged. Prerequisite: completion of at least six courses and department requirement for Ph.D. May not be applied toward 32-unit requirement. May be repeated for credit. S/U grading.

598. M.A. Research and Thesis Preparation. (4 to 8) Tutorial, to be arranged. Limited to graduate students. Survey of research needs and thesis preparation. Includes optional section on experimental design and statistical methods in Fall Quarter. Credit (4 units) toward degree is allowed only once, but all M.A. candidates must enroll in course each term they are registered and engaged in thesis preparation. S/U grading.

597. Preparation for Ph.D. Candidacy Examination. (4 to 8) Tutorial, to be arranged. Prerequisite: completion of at least six courses and department requirement for Ph.D. May not be applied toward 32-unit requirement. May be repeated for credit. S/U grading.

ARCHAEOLOGY

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Richard G. Lesure, Ph.D. (Anthropology)

John K. Papadopoulos, Ph.D. (Classics)

Lothar von Falkenhhausen, Ph.D. (Art History)

Scope and Objectives

The interdisciplinary program offers M.A. and Ph.D. degrees in Archaeology. It brings together interests and specialties represented by those departments offering courses in archaeology, as well as others offering courses relevant to archaeology.
The primary purpose of the program is to train scholars in archaeology for university-level teaching and research and other professional aims. Its resources are intended for those archaeology students whose academic goals cannot be met within any single department and who, consequently, require an individually designed plan of study combining academic preparation in two or more departments. Applications are especially encouraged from students whose interests may form bridges with disciplines and departments not offering archaeology (e.g., botany, chemistry, geology, mathematics, statistics, and zoology). There are opportunities for participation in a variety of field, laboratory, and computer studies.

Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website, http://grad.ucla.edu/gasaa.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 Archaeology Program offers Master of Arts (M.A.), Candidate in Philosophy (C.Phil.), and Doctor of Philosophy (Ph.D.) degrees in Archaeology but does not encourage applicants who seek only an M.A. degree.

Archaeology

Upper Division Courses

C110. Archaeological Materials Identification and Characterization. (4) Lecture, one hour; laboratory, two hours. Laboratory-oriented introduction for archaeologists to identification and quantitative description of solid materials, especially metals, ceramics, and other inorganic and some organic substances. Concurrently scheduled with course C210. P/NC or letter grading.

C120. Special Topics in Archaeology. (2 or 4) Lecture, three hours. Designed for juniors/seniors. Special topics on theoretical subjects in archaeology such as new 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/NC or letter grading). 2-unit course has P/NC 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 C259. P/NC or letter grading.

C180. Ancient and Historic Metals: Corrosion, Technology, and Microstructure. (6) Seminar, four hours; laboratory, four hours. Overview of technology of ancient metals, aspects of extraction and alloying, corrosion, surface patination, metal phase diagrams, 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 high-tin bronze alloys, 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. Seminars discuss case studies, readings, and implications of such disciplines as surveying, dating, paleoenvironments 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 coating, 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 high-tin bronze alloys, Peruvian, Colombian, Costa Rican, and Panamanian copper and gold-copper alloys. Concurrently scheduled with course C280. Letter grading.

M201C. Archaeological Research Design. (4) (Same as Ancient Near East M201.) Seminar, three hours. Required of all students. Research design of prehistoric and historic archaeological projects in preparation for M.A. thesis or Ph.D. phase. Students do exploratory research to select subject, then write research design that can form basis for extensive paper, grant application, or oral examination. Students work closely with faculty members and report weekly on their progress. Preparation of at least two oral progress-reports presentation 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 culture remains. Topic may be one of following: zooarchaeology, paleoethnobotany, ceramics, lithic analysis, rock art. Laboratory experience with collections and data. May be repeated for credit with topic change. S/U or letter grading.

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.

M210. Archaeological Materials Identification and Characterization. (4) Lecture, one hour; laboratory, two hours. Laboratory-oriented introduction for archaeologists to identification and quantitative description of solid materials, especially metals, ceramics, and other inorganic and some organic substances. Concurrently scheduled with course C110. P/NC or letter grading.

M214. Comparative Study of Ancient States. (4) (Same as Anthropology CM214S.) Lecture, three hours. Comparative anthropological study of first complex societies in Near East, Mesoamerica, and Andes, including early Egyptian, Ur, Teotihuacan, classic Maya, Wari, and Tiwanaku, with focus on political and economic structures of these societies and on causes of state development and collapse. S/U or letter grading.

M220. 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 scholars. 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 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 ("law of superposition") and development 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 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 coating, 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 high-tin bronze alloys, Peruvian, Colombian, Costa Rican, and Panamanian copper and gold-copper alloys. Concurrently scheduled with course C180. Letter grading.

C281. Cooperative Projects. (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. 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

Scope and Objectives

The Department of Architecture and Urban Design at UCLA offers a Bachelor of Arts degree in Architectural Studies and four graduate degree programs tailored to the needs of different groups of students: M.Arch. I, M.Arch. II, M.A., and Ph.D.

M.Arch. I is a three-year first professional degree program accredited by the National Architectural Accrediting Board (NAAB). It does not assume any prior background in architecture. Students who do have some prior architecture background (e.g., a four-year undergraduate degree) may also enter the program and may petition to waive certain required courses and substitute more advanced electives in their place. M.Arch. I graduates normally pursue professional careers in architectural practice.

M.Arch. II is an advanced self-supporting professional degree program for students who already hold a first professional degree in architecture. It provides opportunities for intensive concentration in a variety of areas of professional specialization.

The M.A. and Ph.D. degree programs provide opportunities to pursue research and scholarship in the field of architecture. Graduates typically pursue academic or applied research and consulting careers.

In the U.S. most state registration boards require a degree from an accredited professional degree program as a requisite for licensure. NAAB, the sole agency accredited to certify U.S. professional degree programs in architecture, recognizes two types of degrees: Bachelor of Architecture and Master of Architecture. A program may be granted a five-year, three-year, or two-year term of accreditation, depending on its degree of conformance with established standards. Master's degree programs may consist of a preprofessional undergraduate degree and a professional graduate degree which, when earned sequentially, comprise an accredited professional education. However, the preprofessional degree is not, by itself, recognized as an accredited degree.

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, but must have at least a 3.0 cumulative grade-point average and be required to complete the Preparation for the Major courses, which includes 12 units during their first quarter. Application for admission to the major must be submitted by February 15.

Preparation for the Major

The Major
Required: Architecture and Urban Design 121, 122, 123, 131, 132, 133, 141, 142, 143.

Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website, http://grad.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 Architecture and Urban Design offers Master of Architecture I (M.Arch. I) and Master of Architecture II (M.Arch. II) degrees, and Master of Arts (M.A.) and Doctor of Philosophy (Ph.D.) degrees in Architecture. A concurrent degree program (Architecture M.Arch. I/Urban Planning M.U.R.P.) is also offered.

Architecture and Urban Design

Lower Division Courses

1. Introduction to Design, (2) Studio/lecture/field trips, 40 hours. Limited to high school students. Two to four-week intensive summer course in architectural design, with focus on developing design skills through space making and its representation. Exposure to contemporary architectural practices through studio work, lectures and presentations, field trips, and final demonstration, critique, and exhibition of student work. Offered only as part of Teen Arch Studio summer program. P/NP grading.

10A. History of Architecture and Urban Design: Prehistory to Mannerism, (5) Lecture, three hours; discussion, one hour; outside study, 11 hours. Development of building forms and design through analysis of world context. P/NP or letter grading.

10B. History of Architecture and Urban Design: Baroque to Contemporary Moment, (5) Lecture, three hours; discussion, one hour; outside study, 11 hours. Survey of architectural and urban history from baroque to contemporary moment that covers significant building traditions, spaces, artifacts, and theories of modernism. Architecture performs as reflection of cultural, sociopolitical, philosophical, and technological transformations in world history. Stylistic genres, applied terminology, seminal texts, and alternative historiographies that apply to design of built domain that range in scale from details to cities. While canon of Western tradition remains overall focus, weekly thematic categories provide variety of conduits for addressing architecture and urban design in global context. P/NP or letter grading.

30. Introduction to Architectural Studies, (5) Lecture, three hours; discussion, one hour; outside study, 11 hours. Exploration of role of built environment in social, cultural, and political life: how buildings are constructed, what they mean, effects they have on world, and ways they imagine new futures and shape private and public life. Focus on key architectural case studies for what each tells us about new possibilities for shaping world in which we live, with emphasis on how architecture extends to cities, roads, books, and films. Consideration of historical context and cultural genealogy of particular buildings and environments, material and economic conditions of building, and more. P/NP or letter grading.

Upper Division Courses

102. Introduction to Representation, (2) Studio, four hours; outside study, two hours. Limited to currently enrolled college/university students and graduates of colleges/universities. Introduction to techniques of spatial representation as they relate to architectural design. How to communicate using two- and three-dimensional drawing and modeling. Analog and digital techniques and opportunity afforded by moving between both. Analog techniques include orthographic and axonometric projection. Digital techniques focus on computer graphics fundamentals, including bit map and vector graphic imaging using Adobe suite and modeling using Rhinoceros. Offered in summer only. Letter grading.

103. Introduction to Architectural Design, (6) Studio, 18 hours. Limited to currently enrolled college/university students and graduates of colleges/universities. Introduction to basic architectural design principles and problem solving. How to control point, line,
surface, and volume to shape spaces for human use. Visual analysis as tool for discussing and understanding organization of repetition, order, scale, and rhythm. Use of case-study analysis to uncover disciplinary issues within design problems and production of individual solutions to problems. Offered in summer only. Letter grading.

121. Studio I. (6) Studio, eight hours; outside study, 10 hours. Enforced requisite: course 121. 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 beings and their created environments. Emphasis on common, ordinary, vernacular, or non-built systems, that are built and used by members of small-scale, traditional, and transitional communities around world. P/NP or letter grading.

131. Issues in Contemporary Design. (5) Lecture, three hours; outside study, 12 hours. Limited to Architectural Studies majors. How global design culture today operates as part of serial, spatial, and social discourses. From development of cities to new formal languages in architecture, consequences of fact that great percentage of our lives is spent in controlled designed environments, including role that research and interdisciplinarity play today in influencing design ideas and processes, as well as how design is influenced by technology and new urban environments.


123. Studio III. (6) Studio, eight hours; outside study, 10 hours. Enforced requisite: 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 role those play in landscape. Introduction to issues of access, analysis, and systems of movement. Structure as serial component that relates to site, construction, topography, climatology, accessibility, and their mutual interaction. Letter grading.

M125B. Digital Cultural Mapping Course B: Google Earth, Geographic Information Systems, Hypercetics, and Timelines, (4) (Same as Ancient Near East M125B) Laboratory, three hours; discussion, one hour. Enforced requisite: Ancient Near East 125A. Hands-on laboratory-based investigation of emerging digital mapping technologies, including instruction in Web-based mapping applications, virtual globes, and geographic information systems (GIS). Critical creativity and development of cultural phenomena, applying skills students learned in Ancient Near East 125A to real-world data sets in humanities and social sciences. By mastering emerging technologies in fields of digital humanities, students take part in current issues in architectural theory. Readings in primary texts serve as framework for understanding nature of speculative inquiry in architectural context. Letter grading.

124. Introduction to Computers. (2) Lecture, three hours. Introduction to basic concepts, skills, and theoretical aspects of computer-aided architecture design. Computer systems and software are commonly found in professional offices. Two- and three-dimensional representation (i.e., painting, drafting, multimedia, hypermedia, and modeling). Letter grading.

126C. 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. Introduction to Sustainable Architecture and Urban Design. (4) (Same as Design | Media Arts M243.) 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.

M227B. Introduction to Geometric Modeling. (4) (Same as Design | Media Arts M242.) Lecture, three hours; outside study, nine hours. Requisite: course M227A 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.

M227C. User Interaction Techniques in Design. (4) (Same as Design | Media Arts M243.) Lecture, three hours; outside study, nine hours. Requisite: course M227A 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.

227D. Design and Building Models. (4) Lecture, three hours. Review of range of information and knowledge potentially used in design. Knowledge representation, abstractions, and structures. 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 M239.) 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 appropri-
ate 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 M292.) Lecture, three hours. Explora-
tions. S/U or letter grading.  

Contents, basic conditions, resources, and con-
stitution, ideology shape design process. Letter grading.  

M272. Real Estate Development and Finance. (4) Same as Urban Planning M272.) Lecture, two hours; workshop, two hours; study, eight hours. Pre-
 requisite: Urban Planning 220A, 220B. Introduction to real estate development process specifically geared to students in planning, architecture, and ur-
ban design. Financial cost model, market studies, designs, loan packages, development plan, and feasi-
bility studies. Lectures and projects integrate develop-
ment process with proposed design solutions that are interactively modified to meet economic feasibility tests. S/U or letter grading.  

286. Roman Architecture and Urbanism. (4) Lecture, three hours. Examination of architectural and ur-
ban developments during Roman period, from archi-
caeo logical period to development of architectural worl-
ked out from various perspectives, with considera-
tion to programming, symbolism, and view-
 ing, as well as to technological, aesthetic, and politi-
cal factors. S/U or letter grading.  

288. Renaissance Architecture and Urbanism. (4) Lecture, three hours. Examination of architectural de-
velopments from 15th to 17th century. Primary focus on Italian peninsula, and extending to entire Medi-
iterranean basin. Analysis of individual structures, cities, and landscape designs to reveal changing cultural and theoretical values, as well as specific aesthetic and iconographic elements. S/U or letter grading.  

289. Special Topics in Architecture and Urban De-
sign. (2 to 4) Lecture, three hours; discussion, two hours. Selected academic topics initiated by stu-
dents, student teams, or faculty and directed by fac-
sulty member. May be repeated for credit. S/U or letter grading.  

290. Special Topics in Critical Studies in Archi-
tectural Culture. (5) Lecture, three hours; discussion, one hour; outside study, 11 hours. Designed for grad-
uate students. Exploration of how architecture oper-
ates in relation to wider cultural, historical, and theo-
retical issues. May be repeated for maximum of 30 units. Letter grading.  

291. Theory of Architectural Programming. (4) Lecture, three hours. Exploration of concepts and meth-
ods of architectural programming and its interrelation to design process; planning of design process; vari-
bious terminologies. S/U or letter grading.  

294A-294B. Environmental Psychology. (4-4) Lecture, three hours. Introduction to models, concepts, and theories concerning impact of environment on human behavior, perception, and thought. Review of research dealing with environmental perception, cogni-
tive mapping, preferences and attitudes toward envi-
ronment, effects of crowding and stress, personal space and territory. S/U or letter grading.  

296. Professional Critique Studies in Architectural Culture. (4) Seminar, three hours. Orientation for Ph.D. students to tradition of architectural theory, scholarship, and research and to current research di-
rections and issues through extensive reading and critical discussion. Letter grading.  

375. Teaching Apprentice Practicum. (1 to 4) Semi-
nar, to be arranged. Preparation: apprentice person-
el or assistant professor, or fellow. Teaching apprenticeship under active guid-
ance and supervision of regular faculty member re-
sponsible for curriculum and instruction at UCLA. May be repeated for credit. S/U grading.  

401. Advanced Studio. (4 to 6) Lecture, three 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 stud-
ios focusing on special topics in architectural and urban design to be offered by faculty members. May 
 be repeated for credit. Letter grading.  

402. Final Advanced Topics Studio. (6) Studio, 12 hours; outside study, six hours. Preparation: satisfac-
tory completion of intermediate- and advanced-level studios for M.Arch. I students; satisfactory comple-
tion of advanced-level studios and fourth-term stand-
ing for M.Arch. II students. Students may choose (through lottery) from several different advanced stu-
dio projects focusing on special topics in architectural and urban design to be offered by faculty members. S/U or letter grading.  

M404. Joint Planning/Architecture Studio. (4) (Same as Urban Planning M404.) Lecture, one hour; discussion, one hour; studio, four hours. Opportunity to con-
 tract on joint planning/architecture project for cli-
tent. Outside speakers; field trips. Examples of past proj-
ects include Third Street Housing, Santa Monica; New 
American House for nontraditional households; Pico-
Aliso Housing, Boyle Heights; working with resi-
dent leaders at Los Angeles City public housing de-
velopments. S/U or letter grading.  

411. Introductory Design Studio. (6) Studio, 12 hours; outside study, six hours. Preparation: intro-
duction to sketching, drawing, perspectives, CAD. Architectural composition is initially studied in terms of its separate 
elements. After each is studied by means of manipu-
 lative exercise that emphasizes its conceptualization of its intrinsic possibilities, students undertake series of 
closedly 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. Con-
centratation on basic skills, leading to projects explor-
ing architectural program in relation to design process and, particularly, implications of program on architect-
ural forms and concepts. In second phase, introduc-
tion to structural elements of building envelope and patent development of developed 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 
elements 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. In-
 troduction to issues such as programming and pro-
 gram manipulation, site planning, urban design, and 
integration of technical specifications and architectural ex-
 pression. Emphasis either on treatment in breadth of 
large-scale projects or exploration in depth and detail of smaller-scale projects. Students learn to integrate structure and environmental control and to present ideas in graphic or model form. Letter grading.  

415. Comprehensive Studio. (6) Studio, 12 hours; outside study, six hours. Requisite: course 414. Cul-
mation of core course (courses 411 through 414), with focus on development phase of project. Techni-
cal considerations such as lighting, material selection, 
sustainability, construction documents, and building 
envelopes to be considered critical to generation of 
architectural form, integrated in design of single build-
ing. Letter grading.  

311. Structures I. (4) Lecture, three hours. Prepara-
ation: basic algebra, geometry, trigonometry. Introduc-
tion to structural behavior and structural statics. Op-

312. Structures II. (4) Lecture, three hours. Requi-
site: course 413. Mechanics of structures and structural ele-
ments. Elastic materials: stress, strain, and stress-
strain relations. Theory of bending: curvature, stress and strain distributions, and plasticity, resist-
ing and plastic moments. Design of beams for bending, shear, and deflections. Torsion members. In-
stability and design of columns. Design for combined bending and compression. Tensile structures: cables, 
pneumatic structures. Slabs and plates; shells and folded plates. S/U or letter grading.  

313. Structures III. (4) Lecture, three hours. Requi-
site: course 413. Introduction to statically indetermi-
inate analysis. Structural materials and loads. Wind 
loads: distribution with height, design for comfort, structure behavior under lateral loads. Steel construc-
tion and concepts for high-rise structures. Structural 
design case studies in timber and steel. Introduction to earth-
quakes: seismology, magnitude, intensity, history. Seismic instrumentation. Case studies of recent earth-
crashes and seismic code requirements. S/U or letter grading.  

346. Introduction to Building Construction. (2) 
Laboratory, two hours; outside study, four hours. In-
troduction to construction techniques. Study of 
physical principles and materials for making archi-
tecture through series of exercises and field trips. Letter grading.  

347. Building Construction. (4) Laboratory, four 
hours; outside study, eight hours. Principles of struc-
ture and enclosure, with focus on production and ma-
terials research. Exploration of building elements for formal and functional properties; in addition, design 
development of project in previos studios. Structural 
case studies in timber and steel. Letter grading.  

411. 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 circula-
tion, communication and electrical power distribution, analysis of interaction of these systems and their inte-
grated effects on architectural form of building. S/U or 
letter grading.  

431. Building Climatology. (4) Lecture, four hours. Prepara-
 tion: basic physics. Designs of buildings that 
specifically respond to local climate; utilization of nat-
ural energies, human thermal comfort; sun motion and 
sun control devices; use of plant materials and land-
form to modify microclimate. S/U or letter grading.  

411. Architectural Practice. (4) Lecture, three hours. 
Historical development of architectural practice as an 
architect in contemporary society, current forms of practice 
and emerging trends. Contractual relationships, ethi-
 cal responsibility, office management and promo-
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James Welling, M.F.A.
Patricia A. Wickman, M.F.A.

Graduate Study
Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website, http://grad.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.

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 180C, one capstone senior studio course (Art 150), and 10 units of art electives.

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 ceramics, new genres, painting and drawing, photography, and sculpture. 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 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.

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. Varied 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, intermedia, 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. Letter grading.
31A. Modernism. (5) Lecture, three hours; discussion, one hour; field trips, three hours. Impact of modernist ideas through later part of 20th century; with focus primarily on work made from 1920s to 1960s. 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 on works from 1960s to 1990s. 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 prac-
tices and theories, with focus on work made from 1960s to present.
Letter grading.

70. Summer Art Institute: Special Topics in Studio. (3) Studio/lecture/field trips, 45 hours. Limited to high school students in Summer Art Institute, Two-week intensive in studio art covering range of media and contemporary ideas. Combined emphasis on parallel studio work, lecture/presentations, field trips, critiques, and final exhibition of student work. Offered only as part of Summer Institute. May be repeated once for credit. P/NP grading.

**Upper Division Courses**

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 relevance 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 expression of individual students’ means of visualization. May be repeated for maximum of 20 units. Letter grading.

132. 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 critical writing and artistic practice, with emphasis of premodern, modern, and postmodern theory as reflected in critical writing and artistic 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 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.

138. Advanced Painting. (5) Studio, eight hours; seven hours arranged. Requisite: course 11B. Selected projects in photography and related media, concentrating on development of individual students’ means of visualization. May be repeated for maximum of 20 units. Letter grading.

139. Advanced Printmaking. (5) Studio, eight hours; seven hours arranged. Requisite: course 11C. Selective studies in fine printmaking, historical and contemporary: woodcut, lithography, silkscreen, mixed media. May be repeated for maximum of 20 units. Letter grading.

145. Advanced Sculpture. (5) Studio, eight hours; seven hours arranged. Requisite: course 11B. Selected studies in sculpture in studio and contemporary modeling, carving, casting, welding, and other media; forms in space, including installations and nonstudio pieces. 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 individual students’ means of visualization. May be repeated for maximum of 20 units. Letter grading.

148. Advanced Ceramics. (5) Studio, eight hours; seven hours arranged. Requisite: course 11E. Selective 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, slipcasting, 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; two to four 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. Limited to junior/senior Art majors. Advanced topics in critical thinking and writing. Emphasis on critical issues, and methodologies. Possible areas of study from structuralism, deconstruction, feminist and psychoanalytic theory, commodification, and censorship. May be repeated for credit. Concurrently scheduled with course C280. Letter grading.

C181. Exhibition and System. (4) Seminar, four hours. Preparation: at least one course from 100 through 150. Examination of temporary exhibition and its associated field of publications as intertextual system of meaning, beginning with individual works and proceeding to on-site analysis of current 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 working with community. 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, discussion, research papers, and oral presentations. Topics announced in advance. May be repeated for credit. Concurrently scheduled with course C283. Letter grading.


M185. Whose Monument Where: Course on Public Art. (4) (Same as Chicana and Chicano Studies M185 and World Arts and Cultures M126.) Lecture, four hours. Recommended corequisite: course M185A, M185B, or M185C. Examination of public monuments in U.S. as basis for cultural insight and critique of American values from perspective of artist. Use of urban language and changing society to examine issue 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 Chicana and Chicano Studies M186A and World Arts and Cultures M125A.) Studio/lecture, four hours. Corequisite: course M186AL. Investigation of muralism as method of community education, development, and empowerment. Exploration of issues through development of large-scale collaborative digitally created image and/or painting for placement in community. Students research, design, and work with community participants. Continuation of project toward upper division art elective major requirement. May be repeated for maximum of 4 units. P/NP 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, four hours. Corequisites: courses M186BC, M186BL. Continuation of investigation of muralism as method of community education, development, and empowerment. Exploration of issues through development of large-scale collaborative digitally created image and/or painting for placement in community. Students research, design, and work with community participants. Continuation of project toward upper division art elective major requirement. May be repeated for maximum of 4 units. P/NP or letter grading.

C187. Contemporary Art Collections in Los Angeles. (5) Seminar, three hours; outside study, three hours. Limited to junior/senior Art majors. Exploration of current issues regarding concept of collections and collecting. Visit to institutions and discussion of vision, goals, and scope of collections, as well as individual works. Concurrently scheduled with course C287. Letter grading.

190. Studio/Research Colloquia in Art (1) Seminar, three hours. Corequisite: course 197 or 198. Limited to juniors/seniors. Designed to bring together students undertaking supervised tutorial studio projects or research in seminar setting with one or more faculty members. Preparation: at least one course from 100 through 150. May be repeated for credit. P/NP grading.

195A. Community Internships in Art. (2) Formerly numbered 195) Tutorial, supervised setting in community agency or business related to art. Students meet on regular basis with instructor and provide periodic reports of their experience. Only 4 units may be applied toward upper division art elective major requirement. May be repeated for maximum of 8 units. Individual contract with supervising faculty member required. P/NP grading.

195B. Community Internships in Art Education. (4) Tutorial, one hour; fieldwork, eight to 10 hours. Limited to juniors/seniors. Internship in supervised setting in K-12 schools or community arts organization. Students meet on regular basis with instructor and provide periodic reports of their experience. Only 4 units may be applied toward upper division art elective major requirement. May be repeated for maximum of 8 units. Individual contract with supervising faculty member required. P/NP grading.

197. Individual Studies in Art. (2 to 4) Tutorial, to be arranged. Preparation: 3.0 grade-point average in major. Corequisite: course 190. Limited to junior/senior Art majors. 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 must be produced. May be repeated for maximum of 8 units. Individual contract required. Letter grading.


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The rich and varied art resources available at UCLA and throughout Southern California offer students extraordinary opportunities to supplement the formal curriculum.

Undergraduate Study

Art History B.A.

Preparation for the Major

Required: Two courses from Art History 50, 51, 54, 57 and two courses from 55A, 55B, 56A, 56B. It is strongly recommended that these courses be taken prior to enrollment in upper division courses.

Transfer Students

Transfer applicants to the Art History major with 90 or more units must complete as many of the following introductory courses as possible prior to admission to UCLA: two art history courses in ancient, Renaissance and baroque, medieval, or modern art and two courses in African, Asian, oceanic, Native American, or pre-Columbian art.

Refer to the UCLA Transfer Admission Guide at http://www.admissions.ucla.edu/prospect/admtr.htm for up-to-date information regarding transfer selection for admission.

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The Major

Required: Eleven upper division art history courses as follows:

A total of six courses (24 units) from the following 12 areas are required, distributed as follows: one course from three different areas in 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 are 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.

Each course, including foreign language courses, 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 Art History majors who are interested in carrying out an independent research project that culminates in a departmental honors thesis of approximately 30 pages. The program gives qualified students the opportunity to work closely with individual professors on an in-depth supervised research and writing project.

All senior Art History majors who have completed a minimum of six upper division art history courses with a departmental grade-point average of 3.5 or better and an overall GPA of 3.0 or better are eligible to apply. Consult the art history student affairs officer no later than the beginning of Fall Quarter of the senior year.

To qualify for graduation with honors, students must (1) complete all requirements for the major, (2) have a cumulative grade-point average of 3.5 or better in upper division courses in the department and an overall GPA of 3.0 or better, and (3) complete Art History 198A and 198B with grades of A– or better.

To qualify for graduation with highest honors, students must (1) complete all requirements for the major, (2) have a cumulative GPA of 3.85 or better in upper division courses in the department and an overall GPA of 3.65 or better, and (3) complete courses 198A and 198B with grades of A.

Art History Minor

The Art History minor is designed for students who wish to augment their major with a series of courses that analyze the history, theory, and criticism of diverse visual traditions in world culture. On the lower division level, the minor exposes students to overviews of these traditions in broad time periods from ancient to modern, from the regional to the global, as well as to courses that trace the historical significance of art in the context of specific thematic and media concerns. Upper division courses offer more specialized content that explores crucial episodes or areas with more intense and rigorous theoretical and methodological strategies.

To enter the minor students must be in good standing with an overall GPA of 3.65 or better, have completed 45 units, and (2) have a cumulative GPA of 3.85 or better in upper division courses in the major, (2) have a cumulative GPA of 3.85 or better in upper division courses in the major, (3) complete courses 198A and 198B with grades of A– or better.

Graduate Study

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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. Prehistoric, Egyptian, Mesopotamian, Aegean, Greek, Hellenistic, and Roman art and architecture, 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 and impressionists to pop art and minimalism. Study of origins and social functions, as well as aesthetic innovations and philosophical dilemmas of modernism. P/NP or letter grading.

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 tools of stylistic and iconographical analysis. Coverage of historical development of European art and architecture over period of almost 500 years and exploration of ways in which those in religious and secular power used images to promote their particular ideologies. P/NP or letter grading.
88. Lower Division Seminars. (4) Seminar, three hours. Limited to freshmen. Variable topics; consult Schedule of Classes or department for topics to be offered in specific term. P/NP or letter grading.

Upper Division Courses

100. Art Historical Theories and Methodologies. (4) Seminar, three hours. Requires: 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 Ancient Near East CM101A.) 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 Ancient Near East CM101B.) 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 Ancient Near East M101C.) Lecture, four hours; fieldwork, one hour. Focus on ancient temples of city of Thebes (modern day Luxor). Theban temples and cities 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 ceramic iconography of individual temples. P/NP or letter grading.

M102A. Minoan Art and Archaeology. (4) Same as Classics M153A.) Lecture, three hours. Requires: 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. Requires: 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. Archaic Greek Art and Archaeology. (4) Same as Classics M153C.) Lecture, three hours. Requires: 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. Requires: course 50 or Classics 10 or 51A. Study of development of art and architecture of Greek world from approximately 490 through 300 B.C. P/NP or letter grading.

M102E. Hellenistic Greek Art and Archaeology. (4) Same as Classics M153E.) Lecture, three hours. Requires: 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. Requires: 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. Requires: 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. Requires: course 50 or Classics 20 or 51B. Late Roman Empire from 2nd through 4th century (A.D.). P/NP or letter grading.

M102I. M102J. Classical Archaeology. (4-4) Same as Classics M153I-M153J.) Lecture, three hours. Requires: one course from 50, Classics 10, 20, 30, 51A, 51B. Art history of Greek and Latin not required. General introduction to study of Aegean, Greek, and Roman architecture, sculpture, and painting. May be repeated for credit with department consent. M102L. Greco-Roman Architecture; M102M. Greco-Roman Sculpture; M102N. Greco-Roman Painting.

C103A-C103B. Museum Studies. (4-4) 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 collections.

C103C. Museum Studies Practicum. (2-4) Lecture, three hours. Requires: courses C103A, C103B. On-site examination and discussion of selected artworks, exhibitions, and associated published and distributed materials, and of museum and gallery institutions, practices, and policies. Concurrently scheduled with course C203C. Letter grading.

C103D. Preservation of Art. (4) Lecture, three hours. Designed for Art History majors and other juniors/seniors. Introduction to preservation of cultural heritage materials, including what should be preserved and why, as well as who should be involved in decision-making process. Discussion of issues of preservation and restoration of these cultural heritage materials both in museum and outdoor environments. Materials and techniques used to make cultural heritage materials, in relation to preservation efforts needed to prevent decay and loss. Introduction to examples of conservation issues related to sites, buildings, monuments, and collections. Ethical and professional responsibilities and possible consequences of changing values, illustrating how cultural materials may have been treated differently according to those values. Concurrently scheduled with course C203E. P/NP or letter grading.

C103F. Art: Fakes, Forgeries, and Authenticity. (4) Lecture, three hours. Examination of concepts of authenticity, originality, fakes, and forgeries in art. Overview of problems inherent in concept of authenticity and description of many examples of problems related to this concept in series of discussions based on objects from variety of cultures. Introduction to subject of fakes and account of three different areas of connoisseurship that are essential component of production, study, and scientific examination of fakes. Nature of art connoisseurship described in many examples from Renaissance and earlier panel paintings, as well as antiquities and traditional African arts. Background of art restoration and art conservation discussed in relationship to authenticity and technical studies. Scientific tools that form basis of another kind of connoisseurship described in terms of dating techniques that can be applied directly to works of art and technical methods by which material constituents of works of art are studied. Concurrently scheduled with course C203G. P/NP or letter grading.

104A. Western Islamic Art. (4) Lecture, three hours. From Tigris and Euphrates Rivers to Spain, 7th to 18th 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 and its artistic heritage may be repeated for credit with consent of adviser. Concurrently scheduled with course C214. P/NP or letter grading.


105E. Byzantine Art. (4) Lecture, three hours. Requires: course 51. Theory 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.


105H. Italian Art of the 18th Century. (4) Lecture, three hours. Concurrently scheduled with course C209A. P/NP or letter grading.

105I. Italian Art of the 19th Century. (4) Lecture, three hours. Concurrently scheduled with course C209B. P/NP or letter grading.

105J. Italian Art of the 20th Century. (4) Lecture, three hours. Concurrently scheduled with course C209C. P/NP or letter grading.

M110D. Cultural and Intellectual History of Modern Europe, 1789 to Present, as History M122E. (4) 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. Requisite: course 54. Changing topics in modern art (post-1789) that reflect interests of individual regular and 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). 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 C212F. P/NP or letter grading.

C110L. 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, indigenism, postcolonialism, and postmodernism in painting, sculpture, prints, photography, and architecture. Concurrently scheduled with course C254. P/NP or letter grading.

C110J. Variable Topics in Western Art. (4) Lecture, three hours. Selected topics in arts of Western peoples that reflect interests of individual regular and visiting faculty members. May be repeated for credit with topic change. P/NP or letter grading.

112A. American Art before Civil War. (4) Lecture, three hours. Painting, sculpture, and architecture in U.S. from Colonial period through Civil War. Concurrently scheduled with course C212A. P/NP or letter grading.

112B. American Art in Gilded Age, 1860 to 1900. (4) Lecture, three hours. Painting, sculpture, and architecture in U.S. from Civil War to turn of century. Concurrently scheduled with course C212B. P/NP or letter grading.

C112C. American Art, 1900 to 1945. (4) Lecture, three hours. Painting, sculpture, and photography in U.S. from 1900 to 1945. Concurrently scheduled with course C212C. P/NP or letter grading.

CM112D. African American Art. (4) (Same as Afro-American Studies CM112D.) Lecture, three hours. Detailed inquiry into work of 20th-century African American artists whose works provide insight and critical commentary about major features of American life and society, including visits to various key African American cultural institutions and contemporary scheduled with course CM122D. P/NP or letter grading.

C112E. African American Art. (4) (Same as Afro-American Studies CM112E.) Lecture, three hours. Continuation of 112D, involving detailed inquiry into work of 20th-century African American artists. Concurrently scheduled with course CM122E. P/NP or letter grading.

C115. Imaging Black Popular Culture. (4) (Same as Afro-American Studies CM115E.) Lecture, three hours. Critical examination of media ranging from African American painting and sculpture to MTV and advertising, with emphasis on relationship between black visual production and racism, Afrocentrism, political, and notions of blackness. Concurrently scheduled with course CM212F. P/NP or letter grading.

113A. Architecture in U.S. (4) Lecture, three hours; discussion, one hour. Introduction to architecture built in U.S. over last 5,000 years. Architecture as vehicle for political and cultural authority, citizenship, ethnic and racial identity, and relaying our relationship to natural environment and as vehicle for asserting human control over natural world; its place in world of work and commerce; and its status as professional and aesthetic pursuit. P/NP or letter grading.

113B. 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 urban centers to cities with focus on recent centuries. P/NP or letter grading.

113C. 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. Study includes isolated houses and rural houses, and urban and ordinary and (or vernacular) houses, houses of indigenous groups and those of immigrants of many sorts, urban and rural houses, and single-family houses and multiple-unit housing. P/NP or letter grading.

114A. Early Art of India. (4) Lecture, three hours. Not open to freshmen. Study of Indian art from Indus Valley cultures to 10th century. Emphasis on Buddhist and Hindu backgrounds of arts. P/NP or letter grading.


114D. Later Art of India. (4) Lecture, three hours. Not open to freshmen. Study of Indian art from 10th to 19th century. Decline of Buddhist art, last efflorescence of Hindu architecture, Muslim painting and architecture, and Rajput painting. P/NP or letter grading.

114E. 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 and on ceramic, and Yi literate painting. P/NP or letter grading.

114F. 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 of Burma, Malaysia, Thailand, Cambodia, Vietnam, and Indonesia. P/NP or letter grading.

114G. Archaeology of Japanese Islands. (4) Lecture, three hours. Limited to juniors/seniors. Survey of archaeology of Japanese islands; from Paleolithic to historical period, with focus on earliest stone age cultures and Jomon period. Consideration of Yayoi period in context of origins of agriculture on islands, while discussing Kanmuri ceramics, and Yamato culture and iconographic problems. Concurrently scheduled with course CM218A. P/NP or letter grading.

114H. 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. Concurrently scheduled with course C218B. P/NP or letter grading.

115F. 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, porcelain, textiles, jade, and bamboo carving, etc.). Concurrently scheduled with course C218C. P/NP or letter grading.

115L. Selected Topics in Chinese Art. (4) Lecture, three hours. Visits to various sites in Chinese art that reflect interests of individual regular and/or visiting faculty members. Concurrently scheduled with course C218E. P/NP or letter grading.

115J. Fieldwork in Archaeology. (8) Fieldwork, eight hours. Courses take place at Yangguanzhai 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, UCLA, Shaanxi Archaeology, and Xi’an University in Xi’an China. Students spend first week in Xi’an for five days of lectures and museum instructional tours. Following four weeks are spent in field participating in excavation and laboratory work at Shaanxi Institute of Archaeology’s Jingwei Research Base near Yangguanzhai site. Concurrently scheduled with course C215J. P/NP or letter grading.

117A. Pre-Columbian Art of Mexico. (4) Lecture, three hours. Requisite: course 117B. 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.

117B. 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 3000 B.C. to Conquest, with particular emphasis on history and iconography. Concurrently scheduled with course C218B. P/NP or letter grading.

117C. 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 art of Peru. Concurrently scheduled with course C218C. P/NP or letter grading.

117D. Aztec Art. (4) Lecture, three hours. Requisite: course 55B or 117A. Painting, sculpture, architecture, and other arts of Nahua-speaking peoples of central Mexico in centuries before Spanish conquest, with emphasis on their social and historical context and major scholarly debates. Concurrently scheduled with course C218D. P/NP or letter grading.

117E. Colonial Latin American Art. (4) Lecture, three hours. Requisite: course 55B. Study of art and architecture in conquest, conversion, and colonization; indigenous artistic responses and creation of hybrid visual practices in featherwork, manuscript painting, sculpture, and architecture; maps and geography of colonization; urban planning and
C104B. History of Korean Ceramics. (4) Lecture, three hours. Requisite: course 114E. History of Korean ceramic arts from Neolithic period to 19th century, with special emphasis on technological and stylistic developments. Concurrently scheduled with course C242E. P/NP or letter grading.

C140C. History of Korean Buddhist Art. (Lec-ture, 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 C224C. 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 students and/or visiting faculty members. Concurrently scheduled with course C224A. P/NP or letter grading.

C147. Modern Art, 1900 to 1950. (4) Lecture, three hours. Inquiry into 20th-century modernism from Fauvism to abstraction, collage, photomontage, and Ready-made; rise of automatism and chance procedures; art, utopia, and political revolution; antiformalism and formalism; mass culture, machine paradigm, and world of art and mechanical reproduction. Concurrently scheduled with course C224F. P/NP or letter grading.

C149A. Dada, 1915 to 1923. (4) Lecture, three hours; discussion, one hour (when scheduled). Study of art, literature, film, and performance associated with Dada movement. Particular emphasis on Duchamp's ready-made sculpture as central focus. Concurrency with course C224G. 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 surrealism in France, with special attention to BBK and other members of surreal movement. Concurrently scheduled with course C224H. P/NP or letter grading.

C150A. Contemporary Art, 1940s to 1950s. (4) Lecture, three hours; discussion, one hour (when scheduled). Study of major artists active during World War II in U.S. and Europe, covering abstract expressionism to pop art. Concurrently scheduled with course C225A. P/NP or letter grading.

C150B. Contemporary Art, 1960s to 1970s. (4) Lecture, three hours; discussion, one hour (when scheduled). Study of avant-garde movements and trends in postmodernist art. Concurrently scheduled with course C225B. P/NP or letter grading.

C150C. Contemporary Art, 1980s to Present. (4) Lecture, three hours; discussion, one hour (when scheduled). Study of political and social activism in contemporary art. Concurrently scheduled with course C225C. P/NP or letter grading.

C150D. Selected Topics in Contemporary Art. (4) Lecture, three hours. Requisite: course 54. Changing topics in contemporary art post-1945 that reflect the interests of individual students and/or visiting faculty members. May be repeated for credit. P/NP or letter grading.

C171A-C171B-C171C. History of Photography, 4-4-4. Lecture, three hours. Requisite: course C221A-C221B-C221C. P/NP or letter grading.
202. Topics in Theory and Criticism in Art History. (4) Seminar, three hours. Focused studies of various theoretical approaches to art histories concentrating on particular issues, authors, or methodologies either within or across historical and cultural areas. May be repeated for credit with consent of adviser. S/U or letter grading.

C203A-C203B. Museum Studies. (4-4) Concurrently scheduled with courses C103A-C103B. S/U or letter grading. C203A. 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. C203B. 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. May be repeated for credit with consent of adviser.


203D. Selected Topics in Museum Studies. (4) Seminar, three hours. Changing topics in museological, curatorial, and exhibition practices that reflect interests of research and visiting faculty members. S/U or letter grading.

C203E. Preservation of Art. (4) Lecture, three hours. Designed for anthropology, archaeology, and art history graduate students. An overview of techniques and materials used in the conservation of cultural heritage materials, including what should be preserved and why, as well as who should be involved in decision-making process. Discussion of issues of preservation of cultural heritage materials both in museum and outdoor environments. Materials and techniques used to make cultural heritage materials, in relation to preservation efforts needed to prevent decay and loss. Introduction to examples of conservation issues related to sites, buildings, monuments, and collections. Ethical and contextual aspects with reference to changing values, illusional materials may have been treated differently according to those values. Concurrently scheduled with course C103D. S/U or letter grading.

M203F. Techniques and Materials of Archaeological and Cultural Materials: In Situ and Ex Situ Architectural Decorative Surfaces. (4) (Same as Conservation M250 and Materials Science M215.) Seminar, two hours; laboratory, three hours. Requisite: Conservation M210 or Materials Science M216 or C112. Recommended: course M204A. Designed for graduate conservation and art history students. Principles of archaeological conservation of in situ and ex situ monumental architectural and cultural materials, with focus on rock art, wall paintings, polychrome sculpture, decorative architectural elements, and mosaics, through study of their constituent material and technical characteristics and their geographical, chronological occurrence, technological developments, physical and conservation history, and physical location. Lectures, seminars, and case-study presentations. FIELDWORK, with emphasis on hands-on laboratory experience, and independent research that incorporates literary survey of archaeological and conservation records, scientific data, and ancient treatises. S/U or letter grading.

C203G. Art: Fakes, Forgeries, and Authenticity. (4) Lecture, three hours. Examination of concepts of authenticity, originality, fakes, and forgeries in art. Overview of practices of contribution in concept of authenticity and description of many examples of problems related to this concept in series of discussions based on objects from variety of cultures. Introduction to subject of fakes and account of three different areas of connoisseurship that are essential component of production, study, and scientific examination of fakes. Nature of art connoisseurship described in many examples of fakes from various periods and art periods, as well as antiquities and traditional African arts. Background of art restoration and art conservation discussed in relationship to authenticity and technical studies. Scientific tools that form basis of another kind of art historical knowledge, in terms of dating techniques that can be applied directly to works of art and technical methods by which material constituents of works of art are studied. Concurrently scheduled with course C103F. S/U or letter grading.


M204A. Cultural Materials Science I: Analytical Imaging and Documentation in Conservation of Materials. (4) (Same as Conservation M215.) Lecture, two hours; laboratory, two hours. Basic and advanced techniques on digital photography, computer-aided recording tools, and scientific imaging to determine defect and document condition (defects) and technological features of archaeological and ethnographic materials. Development of basic theoretical knowledge on imaging and photons technology and practical skills on conservation photo-documentation, analytical (fo- rensic) photography, and advanced new imaging technologies. Letter grading.

205. 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 adviser. S/U or letter grading.

206. 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 adviser. S/U or letter grading.


208. Literature of African Art. (4) Seminar, three hours. Limited to graduate students. Designed to prepare both graduate African Art minors and specialists to read current work in the field. Topics in 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 C109A. S/U or letter grading.

210. Egyptian Art. (4) Seminar, two hours. Requisite: 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 adviser. S/U or letter grading.

211. 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 adviser. 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 adviser. 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 architecture in U.S. from Civil War to turn of century. May be repeated for credit with consent of adviser. Concurrently scheduled with course C112B. S/U or letter grading.

C212C. American Art, 1900 to 1945. (4) Lecture, three hours. Painting, sculpture, and architecture in U.S. from 1900 to 1945. May be repeated for credit with consent of adviser. Concurrently scheduled with course C112C. S/U or letter grading.

CM212D. African American Art. (4) (Same as Afro-American Studies CM212D) Lecture, three hours. Detailed inquiry into work of 20th-century African American artists whose works produce insightful and critical commentary about major features of American life and society, including visits to various key African American art institutions in Los Angeles. May be repeated for credit with consent of adviser. Concurrently scheduled with course CM112D. S/U or letter grading.

CM212E. African American Art. (4) (Same as Afro-American Studies CM212E) Lecture, three hours. Concurrently scheduled with course CM212D, involving detailed inquiry into work of 20th-century African American artists. May be repeated for credit with consent of adviser. S/U or letter grading.

213. Advanced Studies in Islamic Art. (4) Seminar, two hours. Art and architecture of Islamic world (Spain to Iran) from 7th to 17th centuries. Historical and theoretical problems related to Islamic culture and artistic production. May be repeated for credit with consent of adviser. S/U or letter grading.

214. 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 C104C. S/U or letter grading.

215J. Fieldwork in Archaeology (8) Fieldwork, eight hours. Course takes place at Yangguanzhai Village in Jing River Valley, approximately 25 kilometers north of ancient city of Xi’an in northwestern China, as collaborative project between Institute of Archaeology at UCLA, Shaanxi Institute of Archaeology, and Xi’an University in Xi’an China. Students spend first week in Xi’an for five days of lectures and museum tours. Following four weeks are spent in field participating in excavation and laboratory work at Shaanxi Institute of Archaeology’s Jingwei Research Base near Yangguanzhai site. Concurrently scheduled with course C115J. S/U or letter grading.


216D. 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 C116D. S/U or letter grading.

217. Primitivism and Art. (4) Lecture, three hours. History of primitivism in visual arts and its institutional basis from 19th century to present, with emphasis on relevance to contemporary issues, critiques, and theory. May be repeated for credit with consent of adviser. S/U or letter grading.
C219A. Pre-Columbian Art of Mexico. (4) Lecture, three hours. Requisite: course 55B. Study of art of selected cultures of Mexico, from circa 1200 B.C. to Conquest, with emphasis on historical and iconographic problems. May be repeated for credit with consent of adviser. Concurrently scheduled with course C117A. S/U or letter grading.

C219B. Pre-Columbian Art of Maya. (4) Lecture, three hours. Requisite: course 55B. Study of art of selected cultures of Mesoamerica from circa 2000 B.C. 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.

C219C. Pre-Columbian Art of Andes. (4) Lecture, three hours; discussion, one hour. Requisite: course 55B. Study of art of selected cultures of South America from circa 2000 B.C. to Conquest, with particular emphasis on history and iconography. May be repeated for credit with consent of adviser. Concurrently scheduled with course C117C. S/U or letter grading.

C218D. Aztec Art. (4) Lecture, three hours. Requisite: course 55B or C117A. Painting, sculpture, architecture, and urban planning of the Mexican-speaking peoples of central Mexico in centuries before Spanish conquest, 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 C117D. 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 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. S/U or letter grading.

219A. Oceanic Art. (4) Seminar, three hours. Studies in selected topics in art of Polynesia, Melanesia, and Australia. 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. Topics in Classical Art. (4) Seminar, two to three hours. Studies in prehistory, ancient Near East, and ancient Greece and Rome. May be repeated for credit with consent of adviser. S/U or letter grading.

222. Classical Art. (4) Seminar, two hours. Studies in Greek and 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.

225. Medieval Art. (4) Seminar, two hours. Studies in selected topics in 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 in Byzantine and European medieval art. Seminar extends over two academic terms. May be repeated for credit with consent of adviser. In Progress (226A) and letter (226B) grading.

229. Renaissance and Baroque Paleography. (4) Seminar, two hours. Preparation: knowledge of Italian. 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, inventories, and inscriptions. 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 Leonardo’s 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. Study of northern art from foundation of academy in 1785 to present day. 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). Research papers and oral reports required. May be repeated for credit with consent of adviser. S/U or letter grading.

242A. History of Korean Painting. (4) Lecture, three hours. Requisite: 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. 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 C140B. S/U or letter grading.

242C. History of Korean Buddhist Art. (4) Lecture, three hours. Requisite: course 114E. History of Buddhist art from Three Kingdom period to Choson dynasty, with special emphasis on Buddhist sculptures, paintings, and architecture. Currently scheduled with course C140C. S/U or letter grading.

242D. Selected Topics in Korean Art. (4) Lecture, three hours. Requisite: course 114E. Variable topics in Korean art that reflect interests of individual regular members. Political 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.

251. Modern Art. (4) Seminar, two hours. Changing topics in modern art (including illustration and other popular media) that reflect major public and cultural attitudes. S/U or letter grading.

253. Modern Art. (4) Seminar, two hours. Changing topics in modern art (including illustration and other popular media) that reflect major public and cultural attitudes. S/U or letter grading.
present. Discussion of weekly readings, student oral presentations, and papers. May be repeated for credit with consent of adviser or letter grading.

M256. 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.

C257. Advanced Indian Art. (4) Lecture, three hours. Requisite: course 114A. Study in Indian sculpture and 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 studies 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.


C251A. 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 (e.g., ceramics, bronzes, jades). 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.

C251B. 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.

C251C. Art and Material Culture of Later Imperial China, 906 to 1911. (4) Lecture, three hours. Secular and religious (Buddhist and Taoist) architecture, painting, sculpture, porcelain, luxury industries (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.

C251D. 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 C115G. S/U or letter grading.

C251E. 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 C115H. S/U or letter grading.

265. Fieldwork in Archaeology. (2 to 8) Fieldwork, to be arranged. Participation in archaeological excavations or other archaeological studies under supervision of staff. May be repeated for credit with consent of adviser. 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 Nicéphore 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 C280B. Letter grading.

280C. Modern and Contemporary South Asian Art. (4) (Formerly numbered C280C.) Lecture, three hours. Topics in modern and contemporary South Asian art from 1500 to present. 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 curricular and instructional content 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 of UCLA graduate art adviser and graduate dean, and host campus instructor, department chair, and graduate dean. Used to record enrollment of UCLA students in courses taken under cooperative arrangements with USC. S/U grading.

596. Directed Individual Study or Research. (2 to 8) Tutorial, to be arranged. May be repeated for credit with consent of adviser. S/U or letter grading.

597. Preparation for M.A. Comprehensive Examination or Ph.D. Qualifying Examinations. (2 to 12) Tutorial, to be arranged. S/U grading.


ARTS AND ARCHITECTURE
School of the 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 Courses

10. Arts Encounters: Exploring Arts Literacy in 21st Century. (5) Lecture, four hours; discussion, one hour; field trips, three hours; outside study, seven hours. Through series of direct encounters with art and artists across global range of practices, course equips students with kinds of critical skills that enhance their understanding of, and sharpen their appetite for, wide range of artistic practices. Attendance at performance/art events outside normal class schedule is mandatory. P/NP or letter grading.

Upper Division 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 maximum of 8 units. P/NP or letter grading.

101. Selected Topics in Arts Education. (4) Lecture, three hours; outside study, nine hours. Selected topics in arts education explored through variety of approaches that may include community projects, guided teaching experiences, studio and/or fieldwork, readings, discussions, research papers, and oral presentations. Topics announced in advance. May be repeated for maximum of 8 units. P/NP or letter grading.

M102. Introduction to Arts Education: Theory and Practice. (4) (Formerly numbered 102.) (Same as Education M104.) 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. Collaborative with partner schools in planning, teaching, and evaluation of arts education programs in dance, music, theater, and visual arts. P/NP or letter grading.

M192. Arts Education Undergraduate Practicum: Preparation, Observation, and Practice. (4) (Formerly numbered 192.) (Same as Education M192.) Seminar, three hours. Enforced requisite: course M102. Limited to juniors/seniors. Training and supervision 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.
Scope and Objectives

The Asian American Studies Department grew out of the social movements and civil rights struggles of the 1960s and 1970s and, since its founding in 2004, has been a national leader in all aspects of this vibrant and fast-growing field of academic inquiry.

In promoting the study of Asians and Pacific Islanders in the U.S. across a number of disciplines, the department values the social relevance of academy-based knowledge production, as well as the connection between academia, the Asian Pacific Islander community, and other disadvantaged social groups. Following such a tradition, faculty members are committed to offering a broad, inclusive, and flexible curriculum that aims to meet maximum student needs, with emphasis on close mentorship, innovative teaching, and engaged scholarship.

The undergraduate program offers a Bachelor of Arts degree for students who major in Asian American Studies, and an Asian American Studies minor for students from other departments. The goals of the education program are to (1) mount teaching missions that enable students to learn, think, and perform in a nurturing and intellectually stimulating environment, (2) equip students with theoretical and practical knowledge, as well as analytical and communicative skills that reflect the excellence of the faculty, and (3) serve student need for personal enrichment by preparing them either for advanced graduate studies or for life after college as citizens, employees, and entrepreneurs.

As a multidisciplinary field, the undergraduate program examines the histories, contemporary realities, and diverse experiences of Asian and Pacific Islander Americans. The range of such examination includes immigration and diaspora, community building, socioeconomic life, race, gender, and generational dynamics, social activism, cultural activity and production (including creative expression), political participation, and transnational engagement.

The graduate program offers a terminal Master of Arts degree and is one of the most intellectually diverse and exciting of its kind in the country. Graduate coursework is centered on interdisciplinary and comparative academic inquiry. The graduate program is designed to provide advanced study in the humanities, social sciences, and professional disciplines.

Undergraduate Study

The Asian American Studies major is a designated capstone major. Students are required to complete either a community-based applied team research project or an independent scholarly or creative expression project. Those who select the community-based project are expected to use their scholarly knowledge and analytical skills to examine problems facing Asian American and/or Pacific Islander populations, think creatively and innovatively about evidence-based solutions, and to produce reports that benefit community stakeholders. Those who select to design and complete an independent scholarly or creative expression project pursue a key idea or theme of personal interest that is related to their prior coursework and to the experiences and realities of Asian American and/or Pacific Islanders. Through their capstone work, all students are expected to demonstrate their skills in using and synthesizing knowledge gained in disparate courses and communicating effectively their findings and conclusions in a final paper, report, or project and in a public forum.

Asian American Studies B.A.

Capstone Major

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: Two courses from Asian American Studies 10 or 10W, 20, 30 or 30W, 40, 50.

Transfer Students

Transfer applicants to the Asian American Studies major with 90 or more units must complete as many of the following courses as possible prior to admission to UCLA: two lower division Asian American studies courses or two courses that focus on Asian Americans.
Required Lower Division Courses (10 units): Two courses from Asian American Studies 10 or 10W, 20, 30 or 30W, 40, 50.

Required Upper Division Courses (20 units): A total of five upper division courses as follows: one multidisciplinary course selected from Asian American Studies 103 through M129 and M172C, one creative expression course selected from 112C, 120, 121, 122B, 142A, 142B, 142C; one diversity course selected from 115, M116, 120, 130A, 130B, 130C, 143B, M143C, M165, 167, M169, 174A, 175A; one global/transnational course selected from 122A, 123, 170, 171, M172C, 174B, 175B; one engaged scholarship course selected from 140SL, 141A, 141B, M143A, 195; five Asian American Studies elective courses selected from 103 through 199; and one capstone project course selected from 185 or 187.

No more than 12 graded units of Asian American Studies 195, 197, 198, and 199 may be applied toward the major. Courses 192 and 196 may not be applied toward the major.

Each course applied toward the major must be taken for a letter grade (courses offered only on a P/NP grading basis are acceptable), 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 each academic year. For application forms and further information, contact the undergraduate counselors.

Requirements
Honors students must take Asian American Studies 198A during Spring Quarter of the junior year. During Fall and Winter Quarters of the senior year, they take courses 198B and 198C, in which they write a thesis or its equivalent under the direction of a faculty member.

Asian American Studies Minor
The Asian American Studies Minor is designed for students who wish to gain understanding of and competence in Asian American studies.

To enter the minor, students must have an overall grade-point average of 2.0 or better, have completed two lower division Asian American studies courses, and file a petition with the undergraduate counselors, Asian American Studies Center, 3336 Rolfe Hall.

Asian American Studies Lower Division Courses
10. History of Asian Americans. (5) Lecture, three hours; discussion, one hour. Open 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. Open 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 interpersonal relations. P/NP or letter grading.

30. Asian American Literature and Culture. (5) Lecture, three hours; discussion, one hour. Open not open for credit to students with credit for course 30W. Multidisciplinary introduction to Asian American literature and cultural production, with examination of some combination of novels, short stories, poetry, drama, performance, film, visual art, music, and/or new media; P/NP or letter grading.
30W. Asian American Literature and Culture. (5) Lecture, three hours; discussion, one hour. Open 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.

90. Asian American Studies 101; one multidisciplinary course selected from 103 through M129 and M172C, one creative expression course selected from 112C, 120, 121, 122B, 142A, 142B, 142C; one diversity course selected from 115, M116, 120, 130A, 130B, 130C, 143B, M143C, M165, 167, M169, 174A, 175A; one global/transnational course selected from 122A, 123, 170, 171, M172C, 174B, 175B; and one engaged scholarship course selected from 140SL, 141A, 141B, M143A, 195. 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 applied toward fulfillment requirements for the minor.
A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor.
Each minor course must be taken for a letter grade (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 Graduation Division website, http://grad.ucla.edu/gasaa/library/pgmgrintro.htm. In many cases, more detailed guidelines may be outlined in announcements, course 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.

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 interpersonal relations. P/NP or letter grading.
30. Asian American Literature and Culture. (5) Lecture, three hours; discussion, one hour. Open not open for credit to students with credit for course 30W. Multidisciplinary introduction to Asian American literature and cultural production, with examination of some combination of novels, short stories, poetry, drama, performance, film, visual art, music, and/or new media; P/NP or letter grading.
30W. Asian American Literature and Culture. (5) Lecture, three hours; discussion, one hour. Open 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.
97. Variable Topics in Asian American Studies. (1 to 5) Lecture, one to two hours. Enforced requisite: English Composition 3 or 3H or English as a Second Language 36. Open 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; P/NP or letter grading.

90. Asian American Studies 101; one multidisciplinary course selected from 103 through M129 and M172C, one creative expression course selected from 112C, 120, 121, 122B, 142A, 142B, 142C; one diversity course selected from 115, M116, 120, 130A, 130B, 130C, 143B, M143C, M165, 167, M169, 174A, 175A; one global/transnational course selected from 122A, 123, 170, 171, M172C, 174B, 175B; and one engaged scholarship course selected from 140SL, 141A, 141B, M143A, 195. 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 applied toward fulfillment requirements for the minor.
A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor.
Each minor course must be taken for a letter grade (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.

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Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduation Division website, http://grad.ucla.edu/gasaa/library/pgmgrintro.htm. In many cases, more detailed guidelines may be outlined in announcements, course 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.
munities of students’ choice, using various field studies techniques of data collection. P/NP or letter grading.

104B. Internships in Asian Pacific Communities. (4) Fieldwork, eight hours minimum. Requisite: course 104A or another Asian American studies course (except 199). Integrates academic and empirical work by providing a range of performing public service and community work in Asian Pacific or other multicultural communities, and of bringing their ongoing internship experiences back to classroom. P/NP or letter grading.

105. Historical Research Methods. (4) Seminar, three hours. Requisite: course 10. Introduction to methods used to locate and analyze source materials for research on Asian American history. Historians have used a 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 M122C. Lecture, three hours; field laboratory. Project-oriented methods course on conducting needs assessment in Asian American communities. Geographic information systems to be used to define problems and needs. Letter grading.

111. World War II. (4) Lecture, three hours. Interdisciplinary examination of role of war that has played in history and culture of Asian Americans, drawing on diverse set 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 of late-19th century to contemporary period. P/NP or letter grading.

M112A. Historical Survey of Asian American Literature. (5) Same as English M102A. Lecture, four hours; discussion, one hour (when scheduled). Enforced requisite: Composition 3 or 3H. Survey of Asian American literature either produced from or thematically reflecting pre-1980 period. Issues include immigration, diaspora, generational conflict, appropriation of cultural traditions, ethnic/genre formation, interethic dynamics, and social movement. Works by such authors as Edith Eaton, Younghui 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) Not the same as course M112B prior to Fall Quarter 2011. (Same as English M102C) 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 nationalism and labor, kinship and sexuality, model minority and Orientalism, and meat versus rice, in study of novels, poetry, performance, memoirs, and essays. May be repeated for credit with top-ic or instructor change. 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 Americans inhabit outside American mainstream and specific factors, such as generation, eth-nicity, gender, class, and sexual orientation, that shape identities. Emphasis on balance 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 specifically toward Asian Americans during World War II and incarceration. Major subject areas include anti-Asian labor legis-lation, legal prohibitions against Asians’ right to testify, Executive Order 9066, and equal educational opportunity for Asians. P/NP or letter grading.

M114. Asian American Education and Schooling. (4) Same as Education M103L. Seminar, four hours. Examination of existing body of research from various disciplines on Asian/Pacific American educational experiences. Letter grading.


M116. Asian American Social Movements. (4) Same as Labor and Workplace Studies M116L. Lecture, three hours. Designed for juniors/seniors. Examination of several dimensions of Asian American so-cial movements, including grassroots, mass move-ment character, political and social vision, and social and political relevance to current issues. How move-ment participants linked struggle for change with own personal transformation and growth. P/NP or letter grading.


118. Asian American Religious History. (4) Lecture, four hours. Examination of religion as thematic thread within context of Asian American history, primarily during World War II. Basic grounding in early Asian American history through exploration of role of religion in various communities. P/NP or letter grading.

M119. Asian American and Pacific Islander Labor Issues. (4) Same as Labor and Workplace Studies M119L. 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 stu-dents can play in supporting labor struggles of low-in-come immigrants. P/NP or letter grading.

120. Asian American History through Lenses. (4) Lecture, three hours. Exploration of documentary film, both as genre and as vehicle to present Asian Ameri-can perspectives on history of Asian American individ-uals, communities, and cultures. P/NP or letter grading.


122A. Indigeneity, Empire, and Resistance in Pac ific Islands. (4) Lecture, three hours. Introduction to indigenous and colonial histories of Pacific Islands. Discussions, film screenings, guest speakers, and reading assignments, with focus on issues of cultural survival, empire, indigeneity, migration, resistance, sovereignty, and war. P/NP or letter grading.

122B. Gender and Film in Pacific. (4) Lecture, three hours. Requisite: course 122A. Exploration of rise of film in Pacific Islands during 20th century, with atten-tion to politics of gender, history, and representation, to engage students in textual and visual readings of feature-length films about Pacific. Discussions, film screenings, and guest speakers, with focus on aes-thethic, cultural, economic, gendered, historical, and political dimensions of films. P/NP or letter grading.

123. Cultures of/against Empire. (4) Seminar, three hours. Critical analysis of linking Asian American studies to study of U.S. cultures of imperialism. Course begins with premise that Asian American studies contribute distinctly to contempor-ary analysis of U.S. cultures of imperialism, drawing on political and intellectual coalitions toward which Asian American studies critique builds. Emphasis on works that approach study of empire through comparative racial formations, cultural nationalism, and studies of migration. P/NP or letter grading.

M129. Health Issues for Asian Americans and Pa-cific Islanders: Myth or Model? (4) Same as Com-munity Health Sciences M140L. 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 sta-tistics and barriers to both care delivery and research for these populations. Letter grading.


M130B. Chinese Immigrant Literature and Film. (4) (Same as Chinese M153 and Comparative Literature M171T.) Lecture, three hours; discussion, one hour. Knowledge of Chinese not required. In-depth look at Chinese immigrant experience by reading literature and watching films. Theories of diaspora, gender, and race to inform thinking and discussion of relevant is-ues. P/NP or letter grading.

M130C. Chinese Immigration. (4) Same as Sociolo-gy M155L. Lecture, three hours; discussion, one hour. Survey of sociological studies of Chinese immi-gration, with focus on international context, organization, and institutions of Chinese America and its interac-tions with social environment. P/NP or letter grading.


M132B. Korean American Literature. (4) Same as Comparative Literature M168L. Seminar, three hours. Comprehensive introduction to Korean American liter-ature, with emphasis on Korean American experiences, problems of gender, race, and class, nationalism, generational relationships, and impact of traditional Korean culture on Korean American literature. P/NP or letter grading.


140SL. Power to People: Asian American and Pa-cific Islander Community-Based Learning. (4) Lecture, two hours; fieldwork, four hours. Enforced requisi-tion, course 10 or 20. Captures core concepts in coursework to engage and critically examine community organizing and community-based organizations (CBOs) in Asian American Studies / 163
American and Pacific Islander communities related to issues such as arts and culture, community health, and applied anthropology.  

141A. Asian American and Pacific Islander Leadership Development Program Part I: Leadership. (4) Lecture, three to four hours. Limited to juniors/seniors. First term of two-term series on leadership development, with focus on Asian American, Pacific Islander, and other ethnic communities in Los Angeles. Examination of different approaches and strategies to community building and maintenance. P/NP or letter grading.  

142A. Ethnocommunications I: Introduction to Creating Community Media. (4) Seminar, three hours. Introduction to ethnocommunications theory and methodology, developed to allow diverse peoples and cultures to reclaim and promote their histories. Viewing of films from mainstream and alternative independent media for critique and discussion and basic instruction in use of digital video technology to preserve culture, communities, and experiences. P/NP or letter grading.  

142B. Ethnocommunications II: Intermediate Creating Community Media. (4) Laboratory, three hours. Continuation of use of digital technology and concepts and methods of Asian Pacific American community preservation. Topics include scriptwriting, budgeting, video image and sound control through camcorder functions, basic composition/lighting, sound recording, interviewing techniques, and editing. Completion of community profile project required. P/NP or letter grading.  

142C. Ethnocommunications III: Advanced Creating Community Media. (2 to 4) Laboratory, two to three hours. Required: course 142B. Advanced instruction in use of digital technology and concepts and methods of Asian Pacific American community preservation. Topics include scriptwriting, budgeting, video image and sound control through camcorder functions, basic composition/lighting, sound recording, interviewing techniques, and editing. Completion of community profile project required. P/NP or letter grading.  

142D. Visualizing History: Introduction to Creating Community Media. (4) Laboratory, three hours. Rapid development in video and digital technologies have made it possible for previously neglected or submerged communities to visually document issues around their 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 publication of new media technologies. P/NP or letter grading.  

143A. Fieldwork in Asian American and Pacific Islander Communities. (4) (Formerly numbered 143A) (Same as Anthropology M139P) Lecture, three hours; discussion, one hour. Critical examination of historical and contemporary experiences of various people in Hawai‘i. Investigation of historical, economic, and political contexts of migration and relations between indigenous peoples, immigrants, and existing racial and ethnic groups. P/NP or letter grading.  

143C. Ethnic Identity and Ethnic Relations in Hawai‘i. (4) (Formerly numbered 143C) (Same as Anthropology M139P) Lecture, three hours; discussion, one hour. Continuing construction and expression of ethnic identity in various cultural forms and social contexts in Hawai‘i. Overview of theoretical approaches to and basic concepts in study of ethnic identity and ethnic relations with focus on historical and contemporary aspects of ethnic identity and ethnic relations in Hawai‘i. Given in Hawai‘i. P/NP or letter grading.  

150. Culture, Media, and Los Angeles. (6) (Same as Afro-American Studies M102 and Honors Collegium M102) Lecture, four hours; screenings, two hours. Designed for juniors/seniors. Role of media in society and its influence on contemporary cultural environment, specifically in Los Angeles; issues of representation as they pertain to race, ethnicity, gender, and sexuality. P/NP or letter grading.  


163. Investigative Journalism and Communities of Color. (4) (Same as Afro-American Studies M163) Lecture, four hours. Understanding investigative journalism in understanding interethnic conflict and cooperation. Exploration of different perspectives on issues by comparing mainstream, ethnic, and alternative media coverage. P/NP or letter grading.  

164B. Wooden Spoon Production: Internationalization: India, Philippines, Singapore, Vietnam. (4) (Same as Gender Studies M164A) Lecture, four hours. Study of various forms of violence done on women not only in and of themselves but also within larger systems of oppression, with focus on Filipino, Vietnamese, Singaporean, and South Asian cultures. Letter grading.  

165. Race, Gender, Class. (5) (Same as Comparative Literature M175) Seminar, three hours. Theoretical and literary readings combined to explore three main aspects of social and cultural experience (race, gender, class) as separate but interconnected spheres affecting both minority and majority populations in U.S. Examination of these issues from comparative perspectives. P/NP or letter grading.  

166A. Immigrant Rights, Labor, and Higher Education. (4) (Same as Chicana and Chicano Studies M156A) Seminar, three hours. New immigrant rights movement, with particular attention to labor and higher education. Overview of history of immigrant rights movement and examination of development of coalition efforts between labor movement and immigrant rights movement nationally and locally. Special focus on issue 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 publication on immigrant students in higher education. P/NP or letter grading.  

166B. Research on Immigration Rights, Labor, and Higher Education. (4) (Same as Chicana and Chicano Studies M156B and Labor and Workplace Studies M166B) Seminar, two hours. Required: course M166A. Expansion of research conducted by students during fall quarter and fall quarter of previous academic year. 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 M167) Seminar, three hours. Development of theoretical concepts and models 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 multietnic and multicultural campaigns for workplace and economic justice. Transnational cross-border solidarity issues and rights of undocumented workers. P/NP or letter grading.  


168. Student-Initiated Retention and Outreach Issues in Higher Education. (4) (Same as Afro-American Studies M118, American Indian Studies M118, 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.  

169. Constructing Race. (4) (Same as Afro-American Studies M159P and Anthropology M159P) Lecture, three hours. Examination of race, socially constructed category, from anthropological perspective. Consideration of development of racial categories over time and in different regions, racial passing, multicultural identities of Asian U.S., whiteness, race in popular culture, and race and identity. P/NP or letter grading.  

170. Transnational Perspectives on Asian America. (4) Lecture, three hours. Recommended preparation: background in Asian Pacific American social and legal 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 survey of new frameworks for understanding these changes in postmodern Asian Pacific 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 topics in context of Asian American history, with focus on connections and linkages between social constructions of race and multilayered social processes that now constitute globalizing Asian America. Theoretical readings assigned. P/NP or letter grading.  

171A. Critical Issues in U.S.-China Relations. (4) Lecture three hours. Not open to freshmen. Critical examination of U.S. involvement in China, Hong Kong, and Taiwan, including study of historical, cultural, political, and socioeconomic factors that shape relations between China, Hong Kong, and Taiwan and U.S. Examination of impact of relationships in Pacific Rim and Chinese Americans and their communities. P/NP or letter grading.  

171B. Critical Issues in U.S.-Japan Relations. (4) Lecture, three hours. Not open to freshmen. Critical examination of U.S. involvement in Japan, including study of historical, cultural, political, and socioeconomic factors that shape relations between Japan and U.S. Examination of impact of relationships in Pacific Rim and Japanese Americans and their communities. P/NP or letter grading.  

171C. Critical Issues in U.S.-Korea Relations. (4) Lecture, three hours. Not open to freshmen. Critical examination of U.S. involvement in Korea, including study of historical, cultural, political, and socioeconomic factors that shape relations between Korea and U.S. Examination of impact of relationships in Pacific Rim and Korean Americans and their communities. P/NP or letter grading.  


171E. Special Courses in Transnationalism and Diasporas. (4) Lecture, three hours; discussion, one hour (when scheduled). Limited to juniors/seniors. Variable topics in selected comparative and international transnational and diasporas. May be repeated for credit with topic change. P/NP or letter grading.

179A. Honors Research in Asian American Studies. (4) Tutorial, three to four hours. Requisites: course 10 or 10W, 20, and 30 or 30W and one course from M108, 187A, or 191A. Introduction to research methodologies 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.

198B-198C. Honors Research in Asian American Studies. (4) Tutorial, three hours. Requisite: course 198A. Course 198B is requisite to 198C. Development and completion of honors comprehensive research project under direct supervision of faculty member. May be repeated for credit. Individual contract required. (Progress 198B and letter 198C 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 comparable knowledge in Asian American studies. Limited to juniors/seniors. Supervised individual research or investigation under guidance of faculty mentor. Culminating research paper or project report required. May be repeated for maximum of 8 units. Individual contract required. P/NP or letter grading.

Graduate Courses

200A. Critical Issues in Asian American Studies. (4) Seminar, three hours. Designed for graduate students. Examination and development of critical appreciation of research literature on Asians in America and development of alternative interpretations of Asian American experience. Topics include American history and economics, political and social psychological issues. S/U or letter grading.

200B. Critical Issues in Asian American Communities. (4) Lecture, three hours. Designed for graduate students. Examination of historical and contemporary perspectives and positions that have become important in Asian American critical practice. S/U or letter grading.


200D. Asian American Literature and Culture. (4) Lecture, three hours. Examination of questions arising from Asian American literature and criticism from mid-1980s to present, with focus on assumptions, possibilities, and limitations of certain theoretical perspectives and positions that have become important in Asian American critical practice. S/U or letter grading.

203. Asian American Research Methods. (4) Seminar, three hours. Introduction to empirical research methods, stressing comparative knowledge of research with ethnic minority populations. Review of characteristics and logical processes of research and applicability of scientific and scholarly inquiry in advanced knowledge. S/U or letter grading.

212. Asian American Studies / 165

213. Asian-American. (4) (Same as Chicana and Chicano Studies M213.) Seminar, three hours. Limited to graduate students. Examination of historical and contemporary populations of Asian-Latinos in Latin America.
America and U.S. Review and critique of nascent litera-
ture on Asian-Latinos and analysis of experience of
Asian-American studies. Designed for graduate students.
Ishiyama, M.A. Preparation for M.A. comprehensive exam-
ation of politics of power, gender, and race in
American journals helps students improve both their
prose style and editorial abilities. Four units may be
applied toward M.A. degree requirements. May be re-
peated once for credit. S/U grading.

495. Supervised Teaching of Asian American Studies.
(Same as Grad. Oriental Stud. M271B) Seminar, three hours.
Preparation: apprentice personnel appointment as teaching assistant in
Asian American studies. 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.

597. Preparation for M.A. Comprehensive Exam-
ination. (2 to 8) Tutorial, three hours. Limited to grad-
uate students. Preparation and research for M.A.
comprehensive examination. S/U grading.

598. Research for and Preparation of M.A. Thesis.
(2 to 8) Tutorial, to be arranged. Preparation of re-

ASIAN LANGUAGES AND CULTURES
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Endowed Professor of Humanities)
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Kuo-yi Pao, M.A., M.S., Emeritus

Lecturers
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Chuc V. Bui, M.A.
Liancheng Chief, Ph.D.
Jane B. Choi, Ph.D.
Nenita P. Domingo, Ph.D.
Eiichi Ikeda, M.A.
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Yumiko Kawanishi, Ph.D.
Gyarnam Mahajan, Ph.D.
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Thu Ba Nguyen-Hoai, Ph.D.
Yoko Nogami, M.A.
Yan Shen, M.A.
Michelle M. Fu Smith, Ph.D.
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Asako H. Takakura, Ed.D.
Juliana Wijaya, Ph.D.
Yu-Wen Yao, M.A.
Jae-eun Yoon, M.A.

Scope and Objectives
The Department of Asian Languages and Cul-
tures offers a wide range of courses in the lan-
guages, literatures, religions, and cultural heri-
tage of China, Japan, and Korea, as well as South and Southeast Asia. The department of-
ters training in many specialized fields such as archaeology, film, folklore, history, linguistics,
literature, mythology, religious studies, and cul-
tural studies. Courses prepare students for ca-
cers in business, government service, interna-
tional 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 ma-
jors also provide opportunities for education abroad in an Asian country: The language courses aim to develop the four skills of speak-
ning, aural comprehension, reading, and writing
in a balanced and mutually supportive manner.
The lecture and seminar courses aim to de-
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 pre-
paratory to entrance into the Ph.D. program.
The Ph.D. program, which is very selective,
tains 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.
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 M60, M60W, M61, Chinese M60, M60W, Korean M60, South Asian M60, Southeast Asian M60) within the department.

Transfer Students
Transfer applicants to the Asian Humanities major with 90 or more units must complete as many of the following introductory courses as possible prior to admission to UCLA: two years of Chinese, Japanese, Korean, Filipino/Tagalog, Hindi, Indonesian, Thai, or Vietnamese and either one civilization course on Asia or one introduction to Buddhism course or one introduction to Asian religions course.

Refer to the UCLA Transfer Admission Guide 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 M60, M60W, M61, Chinese M60, M60W, Korean M60, South Asian M60, or Southeast Asian M60.

Transfer Students
Transfer applicants to the Asian Religions major with 90 or more units must complete as many of the following introductory courses as possible prior to admission to UCLA: two years of Chinese, Japanese, Korean, Filipino/Tagalog, Hindi, Indonesian, Thai, or Vietnamese, or one year of Sanskrit, and one introduction to Buddhism course or one introduction to Asian religions course.

Refer to the UCLA Transfer Admission Guide 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 6A or 10 or equivalent, and one course from 50, M60, M60W, 70, or 70W.

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: Eleven courses (42 to 44 units) as follows: (1) five language courses selected from either modern Chinese (Chinese 100A and 100B and 100C or 100L, 101A, 101B, 102A, C107A, 120, 130A or 130B, 135) or from premodern Chinese (100A, 101L, 101C, 104A through 140D, 145) — at least two language courses must be in the premodern language or texts, (2) one literature course selected from 130A, 130B, 131, 135, 140A through 140D, C150A, 150B, 151, 152, or M153, (3) three elective courses on China selected from C138, 139, 145, 155, C156, CM160, 165, 174, C175, 176, 180, 184, 185, 186, 187, 191A, 191B, or from items 1 and 2 above not used to fulfill another requirement, and (4) two additional upper division elective courses within the department but outside 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: Eleven courses (42 to 44 units) as follows: (1) five language courses in modern or premodern language or texts selected from Japanese 100A and 100B and 100C or 100S, 100R, 101A and 101B and 101C or 101S, 102A, 102B, 103A, 103B, 104, 110A, 110B, M120, 130A, 130B, 140A, 140B, 140C, C149, 165, C180, (2) one literature course selected from C150, 151, 154, M156, 157, 158, C159, 170, 172, C173, C177, C186, or 191A, (3) three elective courses on Japan selected from C112, CM122, CM123, CM127, 155, CM160, 161, 165, C171, 175, C182, 191B, 191C, or from items 1 and 2 above not used to fulfill another requirement, and (4) two additional upper division elective courses within the department but outside Japan.

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.
Korean B.A.
Preparation for the Major
Required: Korean 6 or 6A or 10 or equivalent, and 50 or M60.
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.

The Major
Required: Eleven courses (42 to 44 units) as follows: (1) five language courses selected from Korean 100A, 100B, 100C, 101A and 101B and 101C or 101I, 102A, 102B, 102C, 103A, 103B, 103C, 104A, 104B, 104C, C105A, C105B, C105C, 106A, 106B, 106C, 107A, 107B, 107C, CM120, 165, 176, 178, (2) two literature courses selected from 130A, 130B, 150, or 151, (3) three elective courses on Korea selected from CM127, C149, 154, 155, CM160, 165, 172, 175, 177, 180A, 180B, 180C, 181, 182, 183, 184A, 184B, 185, M186, 187, 191A, 191B, or from items 1 and 2 above not used to fulfill another requirement, and (4) two additional upper division elective courses within the department but outside Korea.

Study Abroad
Early acquisition of Asian language skills aids in the timely completion of major requirements and enriches appreciation of Asian cultures. Students are encouraged, therefore, to complete up to a year of language study in approved programs of study abroad.

Honors Program
Admission
The honors program is open to departmental majors with a 3.5 grade-point average in upper division courses in the major and a 3.0 overall GPA. Students should apply for admission by Spring Quarter of their junior year and, at the time of admission, must have completed at least two upper division courses in their major. For application forms and further information, contact the departmental undergraduate advisor.

Requirements
The honors program is a three-term sequence (Asian 198A-198B-198C), taken in addition to requirements for the major, that culminates in the submission of a 40- to 60-page thesis. In most circumstances courses 198A-198B-198C are taken in the senior year (Fall, Winter, and Spring Quarters), although students also have the option of taking course 198A in Spring Quarter of their junior year. Students are expected to use an Asian language in their research, with the scope of language work to be determined in consultation with their faculty advisor. Highest honors, honors, or no honors are awarded as determined by the faculty thesis director and the departmental honors committee.

To qualify for graduation with departmental honors, students must (1) complete all requirements for the major, (2) have a cumulative grade-point average of 3.5 or better in upper division courses required for the major and an overall GPA of 3.0 or better, and (3) complete Asian 198A-198B-198C.

To qualify for graduation with departmental highest honors, students must (1) complete all requirements for the major, (2) have a cumulative grade-point average of 3.8 or better in upper division courses required for the major and an overall GPA of 3.5 or better, and (3) complete Asian 198A-198B-198C with a grade of A in each course.

Asian Humanities Minor
The Asian Humanities minor is designed to recognize a serious commitment to the study of Asian cultures. Lower division survey courses in civilizations and religious traditions provide students with a solid foundation in the diverse cultural heritages of Asia. Students may fulfill upper division requirements from a wide variety of courses in all aspects and historical periods of Asian humanities.

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 major, and consult with the departmental undergraduate advisor.

Required Lower Division Courses (10 units):
Two courses from Asian M60, M60W, M61, Chinese 50, Japanese 10, Korean 6, 10, Thai 6, Vietnamese 6, or equivalent or one introduction to religious study (e.g., Chinese 50, Japanese 50, Korean 50) or one introduction to religious study (e.g., M60W, M61, Chinese M60, M60W, Korean M60, South Asian M60, Southeast Asian M60) offered by the department and two electives within the department.

Required Upper Division Courses (20 units):
Five courses in the department concerning Asian culture (e.g., film, folklore, history, linguistics, literature, mythology, religious studies).

A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor, and at least 16 units must be taken in residence at UCLA.

Each minor course must be taken for a letter grade, and students must have an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

Graduate Study
Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website, http://grad.ucla.edu/gasasap.Nullable, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website, http://grad.ucla.edu/gasasap. 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.Phi.), 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 and Mesoamerica, their evident isolation mark these centers as loci of independent developments in writing. Basic characteristics of early scripts, assessment of modern alpha-
betic writing systems, and presentation of conceptual basis of semiotic language representation. Origins and evolution of 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.

M60. Introduction to Buddhism. (Formerly numbered 121M.) Lecture, three hours; discussion, one hour. Corequisite: English Composition 3 or 3H or English as a Second Language 36. Not open for credit to students with credit for course M60W. 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.

M60W. Introduction to Buddhism. (Formerly numbered 121.) Seminar, three hours; discussion, one hour. Recommended: English Composition 3 or 3H or English as a Second Language 36. Not open for credit to students with credit for course M60W. Knowledge of Asian languages not required. General survey of Buddhism worldview and lifestyle, 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. Letter grading.

M61. Introduction to Zen Buddhism. (Formerly numbered 121L.) 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. Corequisite: Knowledge of a modern or historical Chinese, Japanese, or Korean. Introduction to popular culture in China, Japan, Korea, and Vietnam. Topics include popular religion, language, literature, arts, material culture, cinema, and music. Themes include identity, sexuality, and class relations. Letter grading. 70A. 17th through 19th Centuries; 70B. 1885 to 1945; 70C. From 1945.

Upper Division Courses

120. Languages and Cultures of East Asia. (4) Lecture, three hours; discussion, one hour. Recommended 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 — that are closely related but 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. Requisite: 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; discussion, one hour. 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 for different areas. P/NP or letter grading.

130. Ideas of Culture in East Asian Studies. (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 focus 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 typologies of meditation, symbiotic relationship between meditation and soteriology, and processes by which doctrinal innovation prompts changes in meditative practice. Letter grading.

163. Buddhism across Boundaries. (4) Lecture, two hours; discussion, 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 in periods as well as their cultural and political contexts, 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 archaeological, art historical, material, and discursive approaches to history of religions. Letter grading.

C170. Approaches to Study of Religion. (4) Seminar, three hours. Investigation of many ways in which religion and religions may be studied, including anthropological, sociological, psychological, phenomenological, political, reductionist, and other approaches. Readings of primary and secondary sources of modern scholarship. Concurrently scheduled with course 2270. Letter grading.

190. Research Colloquia in Asian Languages and Cultures. (1) Seminar, one hour. Corequisites: course 198A or 198B or 198C or 199.Designed to bring together students and faculty members who have undertaken individual supervised tutorial research in seminar setting with one or more faculty members to discuss their own work or related work in discipline. Led by one supervising faculty member. May be repeated for credit. P/NP grading.

191A. Variable Topics Research Seminars: Life Writing in East Asia. (4) Seminar, three hours. Requisite: Reading, discussion, and development of culminating project. May be repeated for credit. Letter grading.

191B. Variable Topics Research Seminars: Buddhist Studies. (4) Seminar, three hours. Limited to juniors/seniors. Research seminar on selected topics in Buddhist studies. Reading, discussion, and development of culminating project. May be repeated for credit. Letter grading.

191H. Honors Research Seminars: Asian Languages and Cultures. (4) Seminar, two hours. Limited to un- dergraduate students. Introduction to latest scholarship in field of Asian studies. Attendance at selected scholarly presentations required, as well as sessions with faculty advisor to discuss presentations and publish grades of speakers. May be repeated for credit. P/NP grading.

195. Community Internships in Asian Languages and Cultures. (4) Tutorial, one hour; fieldwork, eight hours. Limited to juniors/seniors. Internship in supervised setting in community organizational setting. Students meet on regular basis with instructor and provide periodic journal reports of their experience. Final paper that combines academic research and knowledge gained from 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. Individual contract required. 198A. (Formerly numbered 198.) Preparation: one under-graduate departmental seminar. Development of honors thesis under direct supervision of faculty member. Letter grading. 198B. Enforced requisite: course 198A. Completion of work initiated in course 198A. Presentation of research and relevant progress to supervising faculty member. In Progress grading (credit to be given only on completion of course 198C). 198C. Enforced requisite: course 198B. Completion of research developed in courses 198A, 198B. Presentation of honors project to supervising faculty member. Letter grading.

199. Directed Research in Asian Languages and Cultures. (2 to 8) Tutorial, to be arranged. Recommended preparation: advanced reading 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. Examination of issues in analyzing language examples, theoretical implications of linguistic data, and applications of functional linguistics in order to explain language phenomena. S/U or letter grading.

201. Proseminar: Approaches to Buddhist Studies. (4) Seminar, three hours. Designed for graduate students in Buddhist studies. Reading of primary and secondary literature, including field, bibliography, religions and cultures. S/U or letter grading.


203. Variable Topics in East Asian Linguistics. (4) Seminar, three hours. Advanced course that explores topics in East Asian linguistics through critical reading of current research on East Asian languages and in-depth analysis of linguistic theories. 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 cultural and historical studies, with focus on China, Japan, and Korea. May be repeated for credit with topic change. S/U or letter grading.

210. Proseminar: Cultural and Comparative Studies. (4) Seminar, three hours. Designed for graduate students. Introduction to theoretical topics relevant to comparative study of East Asian cultures in modern period. Readings include Western theoretical works balanced with texts taking congruent approaches to East Asian traditions. Seminar, letter grading. S/U grading.


216. Seminar: History and Asia. (4) Seminar, three hours. Designed for graduate students. Readings and discussion of major historiographical trends, with focus on how they have been applied to Asia. Topics include Marxist histories, Annales school and cultural history, microhistories, gender, space, historical memory, postcolonial histories, subaltern, and modernity and Asia. S/U or letter grading.

220A–220B. Seminars: Topics in Cultural Studies. (4-4) Seminar, six hours. Co-requisite: course 210. Further investigation of methodology and materials of cultural studies in connection with specific topics selected by instructors. May be repeated for credit. In Progress (220A) and letter (220B) grading.

M222A–M222B. Seminars: Corpus Linguistics. (4-4) (Formerly numbered 222A–222B.) (Same as Applied Linguistics M225A–M225B.) 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 (M222A) and S/U or letter (M222B) grading.

230A–230B. Seminars: Theoretical Topics in East Asian Literature. (4-4) Seminar, three hours. Preparatory reading knowledge of at least one East Asian language. Concerns of literary theory that are brought to bear by reading of literary 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. Preparatory reading knowledge of at least one East Asian language. Complements courses 210A–210B. Further investigation of methodology and materials of cultural studies in connection with specific topics selected by instructors. May be repeated for credit. In Progress (240A) and letter (240B) grading.


245A–245B. Seminars: Position of Modernity in East Asian Literature. (4-4) Seminar, three hours. Preparation: at least five years of one East Asian language. Designed for graduate students. Course 245A concerned with conceptual architecture and archaeology of modernity, with readings largely from European sources. In-class debate probes relevance of these readings for work as Asians. Focus on African and Asian writings in course 245B. In Progress (245A) and letter (245B) grading.


255. Topics in Southeast Asian Literature and/or Cinema. (4) Seminar, three hours. Knowledge of one Southeast Asian language required but not required. Theoretical concerns raised by works from Southeast Asia, one Southeast Asian nation, and/or Southeast Asian diasporas. Critical and historical examination of literary and/or film representations connected to practices of empire, nation, diaspora, and globalization. May be repeated for credit. S/U or letter grading.


265A–265B. Seminars: Selected Topics in Buddhist Studies. (4-4) Seminar, three hours. Coverage varies. May be repeated for credit. In Progress (265A) and letter (265B) grading.

C270. Approaches to Study of Religion. (4) Seminar, three hours. Investigation of many ways in which religion and religions may be studied, including anthropological, sociological, psychological, phenomenological, political, reductionist, and other approaches. Focus on major traditions and processes of modern scholarship. Concurrently scheduled with course C170. Letter grading.

281A–281B. Field Methods for Study of East Asian Drama and Performance. (4-4) Seminar, three hours. Directed discussion and evaluation of modern approaches to collecting and documenting oral tradition as text, performance, and sociocultural event, providing hands-on experience in fieldwork and archiving methods. Consideration of approaches ranging from written transcription and textualization to audio and video presentations. In Progress (281A) and S/U or letter (281B) grading.

M292. Japan in Age of Empire. (4) (Same as Anthropology M276 and History M286.) 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 highly explored area of study of colonialism. S/U or letter grading.

293. Graduate Student Colloquium. (4) Research group meeting, three hours. Designed to provide graduate students in Asian studies with opportunity to present their research to other students and faculty members. S/U grading.

297. Life Writing in East Asia. (4) Seminar, three hours. Readings of biography and autobiography as elements of East Asian cultural traditions, with focus rotating between China, Japan, and Korea. Readings in English and relevant East Asian languages. Letter grading.

299. Independent Study. (2 to 6) Tutorial, to be arranged. Designed for graduate students. Guided research and writing of research paper. May be repeated, but only 4 units may be applied toward M.A. degree. May not be applied toward Ph.D. degree. S/U or letter grading.

301. Teaching East Asian Language as Foreign Language. (4) Lecture, four hours. S/U or letter grading.

375. Teaching Apprentice Practicum. (1 to 4) Seminar, to be arranged. Designed for graduate students. Guided research and writing of research paper. May be repeated, but only 4 units may be applied toward Ph.D. degree. S/U or letter grading.

495. Teaching Asian Languages at College Level. (2) Lecture, two hours; discussion, three hours. Not open to students who have learned, from whatever source, enough Chinese to qualify for more advanced courses. Introduction to fundamentals of standard Chinese, including pronunciation, grammar, and Chinese characters, with emphasis on all four basic language skills — speaking, listening, comprehension, reading, and writing. P/NP or letter grading.

496. Computer Technologies for Teaching College-Level Chinese. (2) Tutorial, two hours. Intended for current or potential teaching assistants in Chinese. Introduction to tools and technology designed to enrich classroom learning, help effectively manage student records, and expose students to current computer software and web resources. May not be applied toward degree requirements. S/U grading.

496E. Computer Technologies for Teaching College-Level East Asian Languages. (2) Lecture, two hours. Intended for current or potential teaching assistants in East Asian languages. Introduction to tools and technology designed to enrich classroom learning, help effectively manage student records, and expose students to current computer software and web resources. May not be applied toward degree requirements. S/U grading.

501. Cooperative Program. (2 to 8) Tutorial, to be arranged. Preparation: consent of UCLA graduate adviser and graduate dean, and host campus instructor, department chair, and graduate dean. Used to record enrollment of UCLA students in courses taken under cooperative arrangements with USC. S/U grading.


Chinese

Lower Division Courses

1. Elementary Modern Chinese. (5) Lecture, two hours; discussion, three hours. Not open to students who have learned, from whatever source, enough Chinese to qualify for more advanced courses. Introduction to fundamentals of standard Chinese, including pronunciation, grammar, and Chinese characters, with emphasis on all four basic language skills — speaking, listening, comprehension, reading, and writing. P/NP or letter grading.

1A. Elementary Modern Chinese for Advanced Beginners. (5) Lecture, two hours; discussion, three hours. Recommended preparation: ability to speak and understand Mandarin or other Chinese dialects at elementary levels. Not open to students who have learned, from whatever source, enough Chinese to qualify for more advanced courses. Frequent use of Mandarin or other Chinese dialects as means of instruction, with emphasis on all four basic language skills — speaking, listening, comprehension, reading, and writing. P/NP or letter grading.
2. Elementary Modern Chinese. (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 1A. P/NP or letter grading.

2A. Elementary Modern Chinese for Advanced Beginners. (5) Lecture, two hours; discussion, three hours. Enforced requisite: course 1A 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 1. P/NP or letter grading.

3. Elementary Modern Chinese. (5) Lecture, two hours; discussion, three hours. Enforced requisite: course 2 with grade of C or better or Chinese placement test. First-year Chinese. Not open to students who have learned, from whatever source, enough Chinese to qualify for more advanced courses. Continuation of course 2. P/NP or letter grading.

3A. Elementary Modern Chinese for Advanced Beginners. (5) Lecture, two hours; discussion, three hours. Enforced requisite: course 2A with grade of C or better or Chinese placement test. First-year Chinese. Not open to students who have learned, from whatever source, enough Chinese to qualify for more advanced courses. Continuation of course 2A. P/NP or letter grading.

4. Intermediate Modern Chinese. (5) Lecture, five hours. Enforced requisite: course 3 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 reviews, knowledge of idiomatic expressions, and both traditional and simplified characters. P/NP or letter grading.

4A. Intermediate Modern Chinese for Advanced Students. (5) Lecture, five hours. Enforced requisite: course 3A with grade of C or better or Chinese placement test. Second-year Chinese. Not open to students who have learned, from whatever source, enough Chinese to qualify for more advanced courses. Designed for students who already have certain listening and speaking skills in Mandarin or other Chinese dialects at intermediate levels. Training in all four basic language skills (speaking, listening, reading, and writing). P/NP or letter grading.

5. Intermediate Modern Chinese. (5) Lecture, five hours. Enforced requisite: course 4 with grade of C or better or Chinese placement test. Second-year Chinese. Not open to students who have learned, from whatever source, enough Chinese to qualify for more advanced courses. Continuation of course 4. P/NP or letter grading.

5A. Intermediate Modern Chinese for Advanced Students. (5) Lecture, five hours. Enforced requisite: course 4A with grade of C or better or Chinese placement test. Second-year Chinese. Not open to students who have learned, from whatever source, enough Chinese to qualify for more advanced courses. 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. Intensive course equivalent to courses 1, 2, and 3. Introduces 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.

8A. Elementary Modern Chinese for Advanced Beginners. Intensive. (15) Lecture, 10 hours; discussion, 10 hours. Recommended preparation: course 3A, 3B, or 8A. Designed for students who already have certain listening and speaking skills in Mandarin Chinese but do not have any reading and writing skills and for students who speak Chinese dialect other than Mandarin at home and have some knowledge of Chinese culture or some basic Chinese. Coverage of listening, speaking, reading, and writing skills. Offered in summer only. P/NP or letter grading.

10. Intermediate Modern Chinese: Intensive. (15) Lecture, 10 hours; discussion, 10 hours. Recommended preparation: course 3, 3A, or 8, or Chinese placement test or courses equivalent to elementary-level Chinese. Second-year Chinese. Not open to students who have learned, from whatever source, enough Chinese to qualify for more advanced courses. Intensive course equivalent to courses 4, 5, and 6. Designed to strengthen communicative skills of listening, speaking, reading, and writing. Grammar reviews, knowledge of idiomatic expressions, and both traditional and simplified characters. Completion of course 10 is equivalent to completion of course 6. Offered in summer only. P/NP or letter grading.

50. Chinese Civilization. (5) Lecture, three hours; discussion, one hour. Not open for credit to students with credit for course 50W. Knowledge of Chinese not required. Introduction to pre-20th century Chinese civilization. Topics include early Chinese civilization, historical development of Chinese society, issues of ethnicity, Chinese language and philosophy, and early scientific and technological innovation. Satisfies Writing II requirement. P/NP or letter grading.

50W. Chinese Civilization. (5) Lecture, three hours; discussion, one hour. Enforced requisite: English Composition 3 or 3H or English as a Second Language 36. Introduction to Chinese civilization. Survey of Chinese history and society, and both traditional and simplified Chinese characters. Completion of course 50 is equivalent to completion of course 50W. Offered in summer only. P/NP or letter grading.

100A-100B. Advanced Modern Chinese. (4-4) Lecture, two hours; discussion, two hours. Enforced requisite: course 50, 50A, or 100 with grade of C or better or Chinese placement test. Course 100A with grade of C or better or Chinese placement test is enforced requisite to 100B. Course 100B with grade of C or better or Chinese placement test is enforced requisite to 100C. Third-year Chinese. Not open to students who have learned, from whatever source, enough Chinese to qualify for more advanced courses. Materials selected from Chinese literary and cultural traditions, including selections from poetry, prose, fiction, and drama. Satisfies Writing II requirement. P/NP or letter grading.

100D. Advanced Modern Chinese for Heritage Speakers. (4-4) Lecture, two hours; discussion, two hours. Enforced requisite: course 5 or 5A 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 100D with grade of C or better or Chinese placement test is enforced requisite to 100F. Third-year Chinese. Not open to students who have learned, from whatever source, enough Chinese to qualify for more advanced courses. Not open for credit to students with credit for course M60. Knowledge of Chinese not required. Introduction to pre-20th-century Chinese literary traditions, including selections from poetry, prose, fiction, and drama. Satisfies Writing II requirement. P/NP or letter grading.

100F. Advanced Modern Chinese for Heritage Speakers. (4-4) Lecture, two hours; discussion, two hours. Enforced requisite: course 50, 50A, or 100 with grade of C or better or Chinese placement test. Not open to students who have learned, from whatever source, enough Chinese to qualify for more advanced courses. Not open for credit to students with credit for course 50. Knowledge of Chinese not required. Introduction to pre-20th-century Chinese literary traditions, including selections from poetry, prose, fiction, and drama. Satisfies Writing II requirement. P/NP or letter grading.

101A-101B. Advanced Readings in Modern Chinese. (4-4) Lecture, two hours; discussion, two hours. Enforced requisite: course 100A or 100B or Chinese placement test. Not open to test takers who have learned, from whatever source, enough Chinese to qualify for more advanced courses. Advanced readings and discussion for students planning to do advanced coursework or research on China. Topics from
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magazines, journals, and books related to humanities and social sciences. Each course may be taken independently for credit.

102A. Advanced Chinese for International Business. (4) Lecture, two hours; discussion, two hours. Recommended preparation: one to two years of college-level Chinese. Designed to improve student language proficiency and understanding of Chinese culture and society. Letter grading.


103. Topics in Chinese Language and Culture. (2 to 4) Lecture, three hours. Chinese language and culture for special purposes. May be repeated for credit. Offered in summer only; P/NP or letter grading.

103A-C107B. Academic/Professional Chinese. (4-4) Lecture, three hours; discussion, one hour. Enforced requisite: course 101B or Chinese placement test. Intended to improve reading and writing skills in specific academic/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 business. Concurrently scheduled with courses C207A-C207B. Letter grading.

108FL. Special Studies: Readings in Chinese. (2) Seminar, 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.

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. Enforced requisite: course 6, 6A, 6C, or 10. Introduction to Chinese sound system, writing system and its reform, regional differences, major structural features, language in society and in cultural practices. Letter grading.

130A-130B. Readings in Modern Chinese Literature. (4-4) Lecture, three hours; discussion, one hour. Enforced requisite: course 100B or Chinese placement test. May be repeated for credit. P/NP or letter grading.

131. Writing from Margin: Global Politics of Sinophone Literature. (3-3) Lecture, three hours; discussion, one hour. Readings in original language. Exploration of Sinophone as analytic trajectory for literature written in Sinitic languages by ethnic minority writers in and outside China, especially in Taiwan, Hong Kong, Malaysia, and U.S. Letter grading.

135. Chinese-Language Film and Culture. (4) Lecture, two hours; discussion, one hour; film viewing, three hours. Enforced requisite: course 100C or 100I or Chinese placement test. Viewing and discussion of Chinese films, along with relevant readings in Chinese. Letter grading.


139. Gardens in China. (4) Lecture, three hours; discussion, one hour. Recommended preparation: course 50. Interdisciplinary survey of historic and literary gardens in China, with focus on English translations of texts by native writers and recent Western scholarship. Letter grading.


C150A. Lyrical Traditions. (4) Lecture, three hours; discussion, one hour. Knowledge of Chinese not required. Readings in narrative and critical writings of traditional China, with emphasis on development of subjectivity and modes of address. Concurrently scheduled with course C250A. P/NP or 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.

151. Chinese Literature in Translation: Modern Literature. (4) Lecture, three hours; discussion, one hour. Enforced requisite: English Composition 3 or 3H or one course from Comparative Literature 1A, 1B, 1C, 1D, Literature 15A, or Chinese 104A. Lectures and reading of representative works from 1890 to present in English translation. Letter grading.


154. Introduction to Chinese Cinema. (4) Lecture, two hours; discussion, one hour; film viewing, three hours. Knowledge of Chinese not required. History of Chinese-language cinema, with emphasis on mainland China. Examination of film style and aesthetics, as well as contexts of industry, economics, politics, culture, and society. May not be repeated for credit. Letter grading.

155. Topics in Chinese Cinema. (4) Lecture, two hours; discussion, one hour; film viewing, three hours. Knowledge of Chinese not required. Critical study of films from China, Hong Kong, Taiwan, and China diaspora. Theories, discourses, spectacles, industry, and audiences. May be repeated for credit with topic change. P/NP or letter grading.

C156. Variable Topics in Culture and Society in Taiwan. (4) Lecture, three hours; discussion, one hour. Designed for seniors; Knowledge of Chinese not required. Examination of relationship between culture (art, literature, film) and society in Taiwan. Reading, audio and visual material, discussion, and development of culminating project. May be repeated for credit. Concurrently scheduled with course C257. 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 cyberspace. P/NP or letter grading.


165. Introduction to Chinese Buddhist Texts. (4) Lecture, three hours; discussion, one hour. Recommended prerequisite: course 100C or equivalent. Reading and analysis of texts by native writers and recent Western translations of texts by foreign visitors through centuries. Concurrently scheduled with course C257. Letter grading.


C175. Introduction to Chinese Thought. (4) Lecture, three hours; discussion, one hour. Knowledge of Chinese not required. Survey of Chinese thought as represented in texts of Zhou through early Han periods (circa 1000 to 100 B.C.E.), with focus on inven- tion of Confucian tradition (including Five Classics) and on defenses of that tradition against challenges from Mohists, Taoists, and other groups of thinkers. Concurrently scheduled with course C275. Letter grading.


180. Chinese Mythology and Supernatural. (4) Lecture, three hours; discussion, one hour. Knowledge of Chinese not required. Survey of corpus of traditional Chinese mythology, with focus on examples preserved in variety of early texts, later evolutions in dramatic and fictional works, and evidence from visual arts. Letter grading.

182. Archaeology of Early Global Trade and Piracy. (4) Lecture, three hours; discussion, one hour. Exploration of role of trade and piracy at threshold of globalization (13th to 17th century), with focus on continu- ity and transformation in Asian trade network in response to early global transition. Concurrently scheduled with archaeological study of porcelain, tracing movement from kilns around Chinese trading ports to shipwrecks and consumer societies in Southeast Asia and colonial America. Concurrently scheduled with course C275. Letter grading.
184. Crime, Law, and Punishment in Traditional China. (4) Lecture, three hours; discussion, one hour. Preventing crime requires administering justice and 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, case law, legal reimagining of trials, depictions of postmortem punishment, and tales of supernatural retribution. Discussion of how legal and penal systems of China have been represented in Western literature. 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, investigation of 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 requisite: course 101B or Chinese placement test. Intended to improve reading and writing skills in specific academic and professional subject areas for students who have studied general Chinese at an 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.

200. 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 Cinemnology. (4) Seminar, three hours. Introduction to major bibliographical and methodological resources in fields of modern Chinese literary and cinematic studies, with focus on theoretical tools, historical knowledge, and critical trends. Letter grading.


202. China Studies: Discipline, Methods, Debates. (2) Same as History M228.) Seminar, two hours. Introduction to study of China as practiced in humanities and social science disciplines. S/U grading.


220A-C220B. Academic/Professional Chinese. (4-4) Lecture, three hours; discussion, one hour. Enforced requisite: course 101B or Chinese placement test. Intended to improve reading and writing skills in specific academic and professional subject areas for students who have studied general Chinese at an 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.

220. Issues in Sinophone Literature. (4) Seminar, three hours. Exploration of selected topics and issues in Sinophone literature, written in Sinitic languages by ethnic minority writers in China, and literature written by those living outside China across world, especially in Malaysia, Taiwan, Singapore, and the U.S. S/U or letter grading.

210. Modern Chinese Literary History. (4) Lecture, three hours. Designed for graduate students. Discussion of history of modern Chinese literature, focusing on sources, controversies, major literary genres, and critical approaches to studying relationship between literature and political history. Emphasis on philosophical, critical, and historical approaches. May be repeated for credit with consent of instructor. In Progress 211A letter (211B) grading.

212. Topics in Chinese Poetry. (4) Readings/discussion, three hours. Selected readings from classical poetic tradition, with focus on individual poets, themes, or other critical issues. May be repeated for credit with consent of instructor. Letter grading.

212A-C212B. Seminar: Topics in Chinese Applied Linguistics. (4-4) Seminar, three hours; film-viewing laboratory, two hours. Advanced topics in Chinese-language cinema. Examination of theory and 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 211A letter (211B) grading.

220A-220B. Theoretical Approaches to Chinese and Sinophone Cultures. (4-4) Seminar, three hours. Discussions to be framed by Western literary and cultural theory, investigating both challenges and limitations Western theories offer for Chinese literature and cultural studies. Specific topics vary from year to year. In Progress (220A) and letter (220B) grading.

224A-224B. Seminars: Selected Topics in Chinese Linguistics. (4-4) Seminar, three hours. Critical reading and discussion of selected topics in Chinese linguistic theory (discourse and grammar, corpus linguistics, sociolinguistics, language change). May be repeated for credit with consent of instructor. In Progress 224A letter (224B) 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 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) Seminar, three hours. Preparation: working knowledge of classical Chinese. Reading and discussions of selections from one traditional Chinese classic (Confucian Five Classics, others), with introduction to exegetical history, secondary scholarship, and research methodology. Topics vary from year to year. May be repeated for credit. In Progress 242A letter (242B) grading.


249A. Lyrical Traditions. (4) Lecture, three hours; discussion, one hour. Readings of poetic and critical writings of traditional China, with emphasis on development of subjectivity and modes of address. Concurrently scheduled with course C136. Graduate students required to read primary materials in original Chinese. S/U or letter grading.

256A-256B. Chinese Literary Criticism. (4-4) Seminar, three hours. Issues in production and interpretation of literary works, as formulated by Chinese critics from classical age onward. Letter grading.

257. Variable Topics in Culture and Society in Taiwan. (4) Lecture, three hours; discussion, one hour. Preparation: knowledge of Chinese not required. Examination of relationship between culture (art, literature, film) and society in Taiwan. Reading, audio and visual material, discussion of literary works, as formulated by Chinese critics from classical age onward. Letter grading.

258. Asian Languages and Cultures / 173
Filipino

Lower Division Courses

1. Introductory Filipino. (Formerly numbered Southeast Asian 70A.) Lecture, two hours; discussion, three hours. Introduction to Philippine language and culture, with emphasis on oral and written communication. P/NP or letter grading.

2. Elementary Filipino. (Formerly numbered Southeast Asian 70B.) Lecture, two hours; discussion, three hours. Elementary Filipino grammar, with equal emphasis on reading, writing, conversation, and comprehension. P/NP or letter grading.

3. Introductory Filipino. (Formerly numbered Southeast Asian 71A.) Lecture, two hours; discussion, three hours. Elementary Filipino grammar, with equal emphasis on reading, writing, conversation, and comprehension. P/NP or letter grading.

Hindi-Urdu

Lower Division Courses

1. Introductory Hindi-Urdu. (Formerly numbered South Asian 40A.) Lecture, two hours; discussion, three hours. Introduction to Hindi-Urdu language and culture, with emphasis on oral and written communication. P/NP or letter grading.

2. Elementary Hindi-Urdu. (Formerly numbered South Asian 40B.) Lecture, two hours; discussion, three hours. Elementary Hindi-Urdu grammar and vocabulary, with emphasis on reading, writing, conversation, and comprehension. P/NP or letter grading.

3. Elementary Hindi-Urdu. (Formerly numbered South Asian 40C.) Lecture, two hours; discussion, three hours. Elementary Hindi-Urdu grammar and vocabulary, with emphasis on reading, writing, conversation, and comprehension. P/NP or letter grading.

4. Elementary Hindi-Urdu Reading and Writing. (Formerly numbered South Asian 41A.) Lecture, two hours; discussion, three hours. Elementary Hindi-Urdu grammar and vocabulary, with emphasis on reading, writing, conversation, and comprehension. P/NP or letter grading.

5. Intermediate Hindi-Urdu. (Formerly numbered South Asian 41B.) Lecture, two hours; discussion, three hours. Intermediate Hindi-Urdu grammar and vocabulary, with emphasis on reading, writing, conversation, and comprehension. P/NP or letter grading.

6. Intermediate Hindi-Urdu. (Formerly numbered South Asian 41C.) Lecture, two hours; discussion, three hours. Intermediate Hindi-Urdu grammar and vocabulary, with emphasis on reading, writing, conversation, and comprehension. P/NP or letter grading.

Indonesian

Lower Division Courses

1. Introductory Indonesian. (Formerly numbered Southeast Asian 80A.) Lecture, five hours. Introduction to Indonesian language and culture, with emphasis on oral and written communication. P/NP or letter grading.
Indonesian grammar, with equal emphasis on reading, writing, listening, and speaking skills. P/NP or letter grading.

4. Intermediate Indonesian. (Formerly numbered Southeast Asian 81A) Lecture, five hours. Enforced requisite: course 3 with grade of C or better. Designed to expand language skills acquired in introductory courses and to equip students with good command of communicative competence in Indonesian. P/NP or letter grading.

5. Intermediate Indonesian. (Formerly numbered Southeast Asian 81B) Lecture, five hours. Enforced requisite: course 4 with grade of C or better. Designed to expand language skills acquired in introductory courses and to equip students with good command of communicative competence in Indonesian. P/NP or letter grading.

6. Intermediate Indonesian. (Formerly numbered Southeast Asian 81C) Lecture, five hours. Enforced requisite: course 5 with grade of C or better. Designed to expand language skills acquired in introductory courses and to equip students with good command of communicative competence in Indonesian. P/NP or letter grading.

Upper Division Courses

100A-100B-100C. Advanced Indonesian. (4-4-4) (Formerly numbered Southeast Asian 182A-182B-182C) Lecture, three hours. Requisite: course 6 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. Preparation for more advanced study of specialized academic subjects, including but not limited to social sciences and humanities. Students read authentic materials in Indonesian concerning various issues. P/NP or letter grading.

109. Advanced Tutorial Instruction in Indonesian. (2) Tutorial, two hours. Requisite: course 6 or Indonesian placement test. Tutorial and guided independent study to help students develop advanced proficiency in oral and written Indonesian. May be repeated for credit. P/NP or letter grading.

Japanese

Lower Division Courses

1. Elementary Modern Japanese. (5) Lecture, two hours; discussion, three hours. Not open to students who have learned, from whatever source, enough Japanese to qualify for more advanced courses. Continuation of course 2. P/NP or letter grading.

2. Elementary Modern Japanese. (5) Lecture, two hours; discussion, three hours. Enforced requisite: course 1 with grade of C or better or Japanese placement test. Not open to students who have learned, from whatever source, enough Japanese to qualify for more advanced courses. Continuation of course 1. P/NP or letter grading.

3. Elementary Modern Japanese. (5) Lecture, two hours; discussion, three hours. Enforced requisite: course 2 with grade of C or better or Japanese placement test. Not open to students who have learned, from whatever source, enough Japanese to qualify for more advanced courses. Continuation of course 2. P/NP or letter grading.

4. Intermediate Modern Japanese. (5) Lecture, five hours. Enforced requisite: course 3 with grade of C or better. Designed to strengthen communicative skills of reading, listening, speaking, and writing. Grammar review, course 4 with grade of C or better, language, listening skills, and sociocultural knowledge. P/NP or letter grading.

5. Intermediate Modern Japanese. (5) Lecture, five hours. Enforced requisite: course 4 with grade of C or better or Japanese placement test. Not open to students who have learned, from whatever source, enough Japanese to qualify for more advanced courses. Continuation of course 4. P/NP or letter grading.

6. Intermediate Modern Japanese. (5) Lecture, five hours. Enforced requisite: course 5 with grade of C or better or Japanese placement test. Not open to students who have learned, from whatever source, enough Japanese to qualify for more advanced courses. Continuation of course 5. P/NP or letter grading.

7. Elementary Japanese: Intensive. (15) Lecture, 10 hours; discussion, 10 hours. Not open to students who have learned, from whatever source, enough Japanese to qualify for more advanced courses. Designed to strengthen communicative skills of reading, listening, speaking, and writing. Offered in summer only. P/NP or letter grading.

8. Elementary Japanese: Reading. (5) Lecture, five hours; discussion, one hour. Requisite: course 5 with grade of C or better or Japanese placement test. Enforced requisite: course 6 with grade of C or better or Japanese placement test. Intensive course equivalent to courses 1, 2, and 3. Introduction to fundamentals of standard Japanese, including pronunciation, grammar, and Japanese characters, with emphasis on all four basic language skills—speaking, listening comprehension, reading, and writing. Offered in summer only. P/NP or letter grading.

9. Intermediate Modern Japanese: Intensive. (15) Lecture, 10 hours; discussion, five hours. Enforced requisite: course 3 with grade of C or better or Japanese placement test. Not open to students who have learned, from whatever source, enough Japanese to qualify for more advanced courses. Intensive course equivalent to courses 4, 5, and 6. Readings in modern Japanese, with emphasis on comprehension and structural analysis. Offered in summer only. P/NP or letter grading.

10. Intermediate Modern Japanese: Intensive. (15) Lecture, 10 hours; discussion, five hours. Enforced requisite: course 3 with grade of C or better or Japanese placement test. Not open to students who have learned, from whatever source, enough Japanese to qualify for more advanced courses. Intensive course equivalent to courses 4, 5, and 6. Readings in modern Japanese, with emphasis on comprehension and structural analysis. Offered in summer only. P/NP or letter grading.


12. Images of Japan: Literature and Film. (5) 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. Enforced requisite: course 6 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 the necessary language skills. P/NP or letter grading.

100S. Third-Year Advanced Reading in Modern Japanese. (4) (Formerly numbered 100I.) Lecture, 10 hours; discussion, one hour. Requisite: course 6 or Japanese placement test. Intensive course equivalent to courses 100A, 100B, and 100C. Learning Japanese language grammar and usage and emphasis on contemporary Japanese society. Materials selected from contemporary publications, videos, and audiotapes. Reading with focus on linguistic features, writing summaries, and opinion essays. Offered in summer only. P/NP or letter grading.

101A. Kanji for Advanced Reading. (4) (Formerly numbered 100D.) Lecture, three hours. Enforced requisite: course 100C or 100S. Development of ability to achieve higher ability in comprehension of written materials in Japanese. Translations from Japanese to English, as well as from English to Japanese. P/NP or letter grading.

100S. Advanced Modern Japanese: Intensive. (12) (Formerly numbered 100L.) Lecture, 10 hours; discussion, one hour. Requisite: course 6 or 10 with grade of C or better or Japanese placement test. Not open to students who have learned, from whatever source, enough Japanese to qualify for more advanced courses. Intensive course equivalent to courses 100A, 100B, and 100C. Learning Japanese language grammar and usage and emphasis on contemporary Japanese society. Materials selected from contemporary publications, videos, and audiotapes. Reading with focus on linguistic features, writing summaries, and opinion essays. Offered in summer only. P/NP or letter grading.

101B-101C. Fourth-Year Japanese: Advanced Reading I, II. (4-4) (Formerly numbered 101A-101B) Lecture, three hours; discussion, one hour. Enforced requisite: course 100C or 100S or Japanese placement test. Not open to students who have learned, from whatever source, enough Japanese to qualify for more advanced courses. Designed to improve skills in Japanese in context of business transactions. To be successful business person, one must be equipped with the necessary language skills. P/NP or letter grading.
advanced specialized oral and written communication skills as well as high degree of cultural understanding. Oral and written business 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 Subjects: Reading in Japanese. (2) Seminar, two hours. Enforced requisite: course 100C or 100I or Japanese placement test. Students must be concurrently enrolled in affiliated main course. Additional work assigned in main course, including reading, writing, and other exercises. May be repeated for credit. P/NP or letter grading.

109. Advanced Tutorial Instruction in Japanese. (2) Tutorial, one hour. Requisite: course 100C or 100I or Japanese placement test. Tutorial and guided independent study to help students develop advanced to superior proficiency in oral and written Japanese. May be repeated for credit. P/NP or letter grading.

110A. Introduction to Classical Japanese: Basic Grammar. (4) (Formerly numbered 110.) Lecture, three hours; discussion, one hour. Enforced requisite: course 100C or 100I or Japanese placement test. Introduction to Classical Japanese Grammar and reading of selected premodern texts. P/NP or letter grading.


121. Japanese Language and Literature. (4) Lecture, three hours; discussion, one hour. Enforced requisite: course 100C or 100I or Japanese placement test. Discussion of philosophical topics such as experience, identity, value, technology, in light of Japanese literary texts. Concurrently scheduled with course C249. Letter grading.

151. Japanese Language in Translation: Modern. (4) Lecture, three hours; discussion, one hour. Enforced requisite: course 100C or 100I or Japanese placement test. Tutorial and guided independent study to help students develop advanced to superior proficiency in oral and written Japanese. May be repeated for credit. P/NP or letter grading.

156. Language and Literature. (4) (Same as Comparative Literature M176.) Lecture, three hours; discussion, one hour. Recommended preparation: two or more years of Japanese. Functional linguistic analysis of grammatical structures of Japanese, often in form of contrastive analysis of Japanese, English, and other languages. Concurrently scheduled with course C223. Letter grading.


158. 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.

160. Japanese Buddhism. (4) (Formerly numbered C160.) (Same as Religion M161B.) Lecture, three hours; discussion, one hour. Knowledge of Japanese not required. Examination of relationship between culture (art, literature, film) and social and cultural history. Reading, audio and visual material in discussion, and development of culminating project. May be repeated for credit with topic change. Concurrently scheduled with course C259. P/NP or letter grading.


170. Japanese Tales of Supernatural. (4) Lecture, three hours; discussion, one hour. Knowledge of Japanese not required. Readings in Japanese culture that feature supernatural beings, including Shinto gods, Buddhist, bodhisattvas, Yin-yang diviners, ghosts, various types of demons, shape-shifting foxes and raccoon dogs, snakes, and dragons. Exploration of different treatments of supernatural themes from ancient to modern times, and of relationship between supernatural literature and expressions of fear, cruelty, violence, misogyny, desire, hope, compassion, and humor. Letter grading.

171. Topics in Japanese Studies. (4) Lecture, three hours; discussion, one hour. Enforced requisite: course 100C or Japanese placement test. Advanced course explores Japanese culture through in-depth reading of Japanese language texts and/or visual documents. Topics include literature, religion, folklore, cultural history, language, and society. Concurrently scheduled with course C271. P/NP or letter grading.

172. Fiction and Plays of Floating World. (4) Lecture, three hours; discussion, one hour. Enforced requisite: course 100C or Japanese placement test. Advanced course explores Japanese culture through in-depth reading of Japanese language texts and/or visual documents. Topics include literature, religion, folklore, cultural history, language, and society. Concurrently scheduled with course C271. P/NP or letter grading.


Graduate Courses


191A. Variable Topics Research Seminars: Classical Japan. (4) Seminar, three hours. Research seminar on selected topics in modern Japanese literature and thought. Reading, discussion, and development of culminating project. May be repeated for credit. Letter grading.

191B. Variable Topics Research Seminars: Modern Japan. (4) Seminar, three hours. Research seminar on selected topics in modern Japan. Reading, discussion, and development of culminating project. May be repeated for credit. Letter grading.


197. Individual Studies in Japanese. (4) Tutorial, to be arranged. Limited to juniors/seniors and graduate students who desire more advanced or specialized instruction in Japanese. Individual intensive study, with scheduled meetings to be arranged between faculty member and student. Assigned reading and tangible evidence of mastery of subject matter required. May be repeated for credit. Individual contract required; see undergraduate adviser. P/NP or letter grading.


C224A-222B. Seminars: Selected Topics in Japanese Discourse Linguistics. (4-4) Seminar, three hours. Requisite: course CM122. Reading and discussion of selected topics in Japanese discourse linguistics. May be repeated for credit with consent of instructor. In Progress (224A) and letter (224B) grading.

C225A-225B. Seminars: Linguistic Analysis of Japanese Narratives. (4-4) Seminar, three hours. Requisite: course CM122. Analysis of selected modern and classical Japanese narratives. Emphasis on exploration of how grammatical features such as tense, aspect, voice, and mood contribute to the 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 backbone for development of Japanese discourse linguistics. May be repeated for credit with consent of instructor. S/U or letter grading.


C229. 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 collection, taxonomy, data collection methodologies, data organization, analytical frameworks. Letter grading.

C231. Nation in Modern Japanese Intellectual Discourse. (4) Lecture, three hours. Enforced requisite: course 101C or 210A. Course 200A is requisite to 221B. Designed for graduate students. Introduction to modern Japanese-language academic texts, both prewar and postwar, with focus on writing, and critical writing, and critical reading of primary and secondary sources. Topics vary. Letter grading.


C211. No and Kyogen. (4) Lecture, three hours. Preparation: one year of classical Japanese. Readings are selected No and Kyogen texts from Murómauchi and Edo periods, as well as readings of critical writings and discussion of topics. May be repeated for credit with consent of instructor. Letter grading.


245A-245B. Seminars: Medieval Japanese Literature. (4-4) Seminar, three hours. Preparation: one year of classical Japanese. Lectures on 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 Japan. (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 of culminating project. May be repeated for credit with topic change. Concurrently scheduled with course C159. S/U or letter grading.


265A-265B. Seminars: Japanese Buddhist Texts. (4-4) Seminar, three hours. May be repeated for credit with consent of instructor. In Progress (265A) and letter (265B) grading.

C270A-270B. Seminars: Japanese Ritual Arts. (4-4) Seminar, three hours. Reading knowledge of Japanese not required. Discussions and readings on ritual (performing) arts of Japan comprising music, dance, storytelling, viewing, purification, divination, disguise, mimicry, and competitive as well as acrobatic arts, with special emphasis on religio-magical purposes and symbolic structure of these arts. In Progress (270A) and letter (270B) grading.


C273. Imperial Culture in Ancient Japan. (4) Lecture, three hours; discussion, one hour. Requisite: course 50. Knowledge of Japanese not required; basic knowledge of Japanese history and culture assumes. Examination of formation of imperial-state style and its culture in Asuka, Nara, and Heian periods (7th- to 10th-century Japan). Literary genres include myths, historical narrative, poetry, short tales, and diaries. Concurrently scheduled with course C173. Letter grading.


Korean

Lower Division Courses

1. Elementary Modern Korean. (5) Lecture, two hours; discussion, three hours. Not open to students who have learned, from whatever source, enough Korean to qualify for more advanced courses. Designed for Korean-heritage learners who have had prior training in Korean. Intensive course equivalent to courses 4, 5, and 6. Not open to students who have learned, from whatever source, enough Korean to qualify for more advanced courses. Intensive course equivalent to courses 4, 5, and 6.

2. Elementary Modern Korean. (5) Lecture, two hours; discussion, three hours. Not open to students who have learned, from whatever source, enough Korean to qualify for more advanced courses. Designed for Korean-heritage learners who have had prior training in Korean. Intensive course equivalent to courses 4, 5, and 6.

3. Elementary Modern Korean. (5) Lecture, two hours; discussion, three hours (when scheduled). 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. Continuation of course 2. 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 Korean to qualify for more advanced courses. Continuation of course 2A, P/NP or letter grading.

5. Intermediate Modern Korean. (5) Lecture, five hours. Enforced requisite: course 3A 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.

6. Intermediate Modern Korean. (5) Lecture, five hours. Enforced requisite: course 3A 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.

7. Elementary Korean for Korean-Heritage Speakers. (5) Lecture, two hours; discussion, one hour. 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. Intensive course equivalent to courses 4, 5, and 6.

8. Elementary Korean for Korean-Heritage Speakers. (5) Lecture, two hours; discussion, one hour. 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. Intensive course equivalent to courses 4, 5, and 6.

9. Elementary Korean for Korean-Heritage Speakers. (5) Lecture, two hours; discussion, one hour. 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. Intensive course equivalent to courses 4, 5, and 6.

10. Intermediate Modern Korean: Intensive. (15) Lecture, 10 hours; discussion, 10 hours. Recommended preparation: course 3, 3A, or 8, or Korean placement test, or courses equivalent to elementary-level Korean. Second-year Korean. Not open to students who have learned, from whatever source, enough Korean to qualify for more advanced courses. Intensive course equivalent to courses 4, 5, and 6.

Upper Division Courses

100A-100B-100C. Advanced Modern Korean. (4-4-4) Lecture, five hours. Enforced requisite: course 6, 6A, or 10 with grade of C or better or Korean placement test. 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 6/6A. Readings of modern and contemporary Korean literature or Korean cinema. Offered in summer only. P/NP or letter grading.

101A-101B-101C. Advanced Modern Korean. (4-4-4) Lecture, three hours. Enforced requisite: course 100A 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. Advanced readings and discussions for students planning to do advanced coursework or research on Korea. Offered in summer only. P/NP or letter grading.

102A-102B-102C. Advanced Korean Conversation. (4-4-4) Lecture, three hours. Enforced requisite: course 100C or Korean placement test. Intensive course equivalent to courses 101A, 101B, and 101C. Advanced Korean conversation and discussion for students planning to do advanced coursework or research on Korea. Offered in summer only. P/NP or letter grading.

103A-103B-103C. Reading 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 required to 103B; course 103B or Korean placement test is required to 103C. Sino-Korean vocabulary and characters necessary for advanced and superior level of knowledge in Korean. Sino-Korean characters are used differently from similar Chinese characters used in contemporary Chinese in terms of pronunciation, meaning, and word formation.
104A-104B-104C. Korean Writing for Advanced Learners. (4-4-4) Lecture, three hours; discussion, one hour. Recommended requisite: course 100C or Korean placement test. Intended to improve reading skills for students who have studied Korean to advanced level, with coverage in Korean of materials on Korean history, culture, and society. Each course may be taken independently for credit. Concurrently scheduled with courses C205A-C205B-C205C. P/NP or letter grading.

105A. Korean Buddhism. (4) Formerly numbered C160. (Same as Religion M161C) Lecture, three hours; discussion, one hour. Knowledge of Korean not required. Introduction to Korean Buddhist texts written in Sino-Korean and taken from indigenous doxographic materials and philosophical writings, Korean Buddhist apocryphal scriptures, native exegetical commentaries, and Son (Zen) texts. Coverage varies. May be repeated with consent of instructor. P/NP or letter grading.

105B. Introduction to Korean Buddhism Texts. (4) Lecture, three hours; discussion, one hour. Recommended requisite: course 100A or Chinese 110C or Korean placement test. Introduction to reading premodern Korean Buddhist texts written in Sino-Korean and taken from indigenous doxographic materials and philosophical writings, Korean Buddhist apocryphal scriptures, native exegetical commentaries, and Son (Zen) texts. Coverage varies. Texts may be read in either Sino-Korean or Chinese. May be repeated with consent of instructor. P/NP or letter grading.

176. Introduction to Korean Confucian Texts. (4) Lecture, three hours. Enforced requisite: course 100C of Chinese 110C or Korean placement test. Reading in premodern Korean and Choson texts on politics, society, and culture. Coverage varies. Texts may be read in either Sino-Korean or Chinese. May be repeated with consent of instructor. P/NP or letter grading.


178. Introduction to Modern Korean Historiography. (Same as Seminar, three hours. Enforced requisite: course 101A or C101A or Korean placement test. Introduction to major Korean language historiographical works on Korean history in modern period. Coverage varies. May be repeated with consent of instructor. P/NP or letter grading.

180A-180B-180C. Cultural History of Korea. (4-4-4) Lecture, three hours; discussion, one hour. Requisite: course 50. Knowledge of Korean not required. Examination of modernizing reforms adopted in Korea in 1894. Consideration of conflict among radical Westernizers who had studied in Japan and U.S., moderate reformers who followed Chinese model of adopting Western technology to defend Confucian order, and orthodox Confucians who strongly opposed any changes. Focus on historical and intellectual background in first half, with debates among students who assume roles in Deliberative Council that was responsible for designing reforms in second half. Letter grading.

183. Korean Folklore. (4) Formerly numbered C150. Lecture, three hours. Enforced requisite: course 100C or Korean placement test. Study of oral and written materials on Korean traditional culture and practices, with emphasis on traditional Korean culture and practices. May be repeated with consent of instructor. P/NP or letter grading.

184A. Women of Premodern Korea. (4) Lecture, three hours; discussion, one hour. Knowledge of Korean history not required. Examination of modernizing reforms adopted in Korea in 1894. Consideration of conflict among radical Westernizers who had studied in Japan and U.S., moderate reformers who followed Chinese model of adopting Western technology to defend Confucian order, and orthodox Confucians who strongly opposed any changes. Focus on historical and intellectual background in first half, with debates among students who assume roles in Deliberative Council that was responsible for designing reforms in second half. Letter grading.

185. Education and Society in Korea. (4) Lecture, three hours. Knowledge of Korean history not required. Examination of modernizing reforms adopted in Korea in 1894. Consideration of conflict among radical Westernizers who had studied in Japan and U.S., moderate reformers who followed Chinese model of adopting Western technology to defend Confucian order, and orthodox Confucians who strongly opposed any changes. Focus on historical and intellectual background in first half, with debates among students who assume roles in Deliberative Council that was responsible for designing reforms in second half. Letter grading.

186. Introduction to Korean Confucian Texts. (4) Lecture, three hours. Enforced requisite: course 100C of Chinese 110C or Korean placement test. Reading in premodern Korean and Choson texts on politics, society, and culture. Coverage varies. Texts may be read in either Sino-Korean or Chinese. May be repeated with consent of instructor. P/NP or letter grading.


188. Introduction to Modern Korean Historiography. (Same as Seminar, three hours. Enforced requisite: course 101A or C101A or Korean placement test. Introduction to major Korean language historiographical works on Korean history in modern period. Coverage varies. May be repeated with consent of instructor. P/NP or letter grading.

189. Introduction to Korean Confucian Texts. (4) Lecture, three hours. Knowledge of Chinese not required. Reading in premodern Korean and Choson texts on politics, society, and culture. Coverage varies. Texts may be read in either Sino-Korean or Chinese. May be repeated with consent of instructor. P/NP or letter grading.
Readings in Asian Languages and Cultures

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. Designed for graduate students. Critical examination of list of books central to field of modern Korean history, including such topics as Korean capitalism and communism, intellectual history, social movements, and Korean War. Letter grading.

212. 19th-Century Korea. (4) Seminar, three hours; discussion, one hour. Concurrent with course 180B or 180C. Proseminar covering crucial period from coronation of Sunjong in 1800 to annexation of Korea by Japan in 1910, including major historical scholarship on political, diplomatic, social, economic, intellectual, and cultural history. Letter grading.

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 area of 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. Recommended preparation: two years of Korean and some knowledge of linguistics. Discussion of major syntactic, semantic, and pragmatic characteristics of Korean in light of linguistic universals, with brief introduction to formation, typological features, and phonological structure of Korean. Concurrently scheduled with course CM120. Letter grading.

224A-224B. Seminars: Selected Topics in Korean Linguistics. (4) Seminar, three hours. Critical reading and discussion of selected topics in functional linguistics (grammaticalization, discourse, pragmatics, sociolinguistics, syntax, morphology) and pedagogy. In Progress (224A) and letter (224B) grading.


230A-230B. Seminars: Literary Translation from Korean. (4) Seminar, three hours. Preparation: reading knowledge of Korean. In consultation with instructor, students choose three topics from specified readings. Recommended: reading knowledge of Chinese or Japanese. Limited to graduate students. Study of selected period, movement, theme, or author of 20th-century Korean literature, with critical review of secondary works in Western and Korean languages. May be repeated for credit with consent of instructor. In Progress (230A) and letter (230B) grading.

235A-235B. Seminars: Topics in Modern Korean Literature. (4) Seminar, three hours. Preparation: at least three years of reading knowledge of Chinese or Japanese. Limited to graduate students. Study of selected period, movement, theme, or author of 20th-century Korean literature, with critical review of secondary works in Western and Korean languages. May be repeated for credit with consent of instructor. In Progress (235A) and letter (235B) grading.

240A-240B. Seminars: Classical Korean Fiction. (4-4) Seminar, three hours. Preparation: reading knowledge of Korean or literary Chinese. Discussion and research on major topics in Korean cultural history, such as Confucianism, ethics, novels, politics, art, society, Practical Learning movement of late Choson dynasty, or Korean reactions to Western Enlightenment movements of 19th century.

245A-245B. Seminars: Classical Korean Poetry. (4-4) Seminar, three hours. Preparation: reading knowledge of Korean or literary Chinese. Critical reading and analysis of 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.


272. Seminar: Korean Christianity. (4) Seminar, three hours. Coverage of representative scholars' writings on history of Korean Christianity, with focus on Protestantism. Issues include politics, identities of Korean Christians and Western missionaries, church growth and decline, medical, educational, literary, and woman's work, and Christianity's encounters with Korean religions, and foreign missions. S/U or letter grading.

275A-275B. Seminars: Topics in Traditional Korean Cultural History. (4-4) Seminar, three hours. Preparation: reading knowledge of Korean or literary Chinese. Discussion and research on major topics in Korean cultural history, such as Confucianism, ethics, novels, politics, art, society, Practical Learning movement of late Choson dynasty, or Korean reactions to Western Enlightenment movements of 19th century. May be repeated for credit. In Progress (275A) and letter (275B) grading.
South Asian

Lower Division Course

M60. Religion in Classical India: Introduction. (5) (Formerly numbered 60B.) Lecture, three hours; discussion, one hour. Introduc- tion to religion in classical India -- Vedic, Brahmi- cal, Hindu, Jain, and Buddhist -- paying equal atten- tion to change and continuity, with emphasis on chronological development. P/NP or letter grading.

Upper Division Courses

110A. Elementary Sanskrit. (4) Lecture, three hours. Introduction to script and grammar, with reading exer- cises and attention to significance of Sanskrit for un- derstanding of other Indo-European languages. P/NP or letter grading.


110C. Advanced Sanskrit. (4) Lecture, three hours. Requisite: course 110B. Reading of entire Bhaga- vadgita or comparable amount of other Sanskrit litera- ture. 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 (under- graduates), S/U (graduates), or letter grading.

150. Classical Indian Literature in Translation. (4) Lecture, three hours. Knowledge of Asian languages not required. Survey of some landmarks of classical Indian literature from second millennium B.C.E. into second millennium C.E., including both poetry and prose, “high” art and more popular genres, and secular and religious texts, examined in their social and in- stitutional contexts. P/NP or letter grading.


CM160. Buddhism in India. (4) (Formerly numbered C160.) Lecture, three hours; discussion, one hour. Knowledge of Indian lan- guages not required. Overview of social and doctrinal history of Buddhism from its origin to its disappear- ance in India, based not only on texts but on archaeo- logical, art historical, and inscriptionsources. Exam- ination of both formal doctrine and actual practices and on what learned Buddhists wrote and ordinary Buddhists did, saw, and made. Concurrently scheduled with course CM160. Letter grading.

Southeast Asian

Lower Division Courses


M60. Religious Traditions in Southeast Asia. (4) (Formerly numbered 60A.) (Same as Religion M60E.) Lecture, three hours. Knowledge of basic Southeast Asian religions may be required. Survey of social and historical development and contemporary practice of religions in Southeast Asia. Examination of indigenous religious beliefs and major textually based religions introduced to region, including Hinduism, Buddhism, Islam, and Christianity. P/NP or letter grading.

70. Modern Southeast Asian Literature. (4) Lec- ture, three hours; discussion, one hour. Introduction to modern literatures of Southeast Asia. Designed to ex- plore student interest in South and Southeast Asia by means of novels and short stories, that were written across this region in response to dramatic changes caused by colonialism and after independence. P/NP or letter grading.

90. Modern Literatures in Southeast Asia. (4) Lec- ture, three hours. Knowledge of Southeast Asian lan- guages not required. Exploration of diversity of South- east Asia in such areas as traditional culture, modern- ization, politics, and literature through modern literary texts. 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. Vardeva (Vedic) Vedic diction and readings in Rig- Vedic hymns. Only course M222B may be repeated for credit. S/U or letter grading.

230. Selected Readings in Sanskrit Texts. (4) Lec- ture, three hours. May be repeated for credit with con- sent of instructor. S/U or letter grading.

234A-234B. Introduction to Panini’s Grammar. (4- 4) Lecture, three hours. Requisite: course 110C. Reading of selected passages of text, with introduc- tion to Panini’s technique. S/U or letter grading.

236A-236B. Pali and Prakrits. (4-4) Lecture, three hours. Preparation: knowledge of Sanskrit equivalent to course 110C. Translation, grammatical analysis, and discussion of selections from premodi- ern Sanskrit, Pali, and/or Prakrits text. S/U or letter grading.

243. Translation Workshop: Premodern Sanskrit, Pali, and/or Prakrits Texts. (2-2) Seminar, two hours. Preparation: knowledge of Sanskrit equivalent to course 110C. Preparation: knowledge of Sanskrit equivalent to course 110C. Letter grading.

Upper Division Courses

130. Topics in Southeast Asian Literature. (4) Lec- ture, three hours; discussion, one hour. Preparation: course 243. Extensive reading in such texts as best serve students’ needs. May be repeated for credit. P/NP or letter grading.

135. Religion and Society in Southeast Asia. (4) Lecture, three hours; discussion, one hour. Critical is- sues related to major religions and traditions in Southeast Asia, with emphasis on reading and reflecting on re- cent scholarship regarding complex interactions be- tween religion, state, and society in contemporary Southeast Asia. P/NP or letter grading.

140. Zomia: Peoples, Societies, and Cultures of Upland Southeast Asia. (4) Lecture, three hours; dis- cussion, one hour. Recommended requisite: prior course in Asian cultures or history. Multidisciplinary survey of peoples of upland Southeast Asia and criti- cal issues affecting them. Topics include history, cul- ture, 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 con- nect 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 Stud- ies. (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.

178. Individual Studies in Southeast Asian. (4) Tu- torial, to be arranged. Limited to juniors/seniors and graduate students who desire more advanced or spe- cialized treatment of one language offered in program beyond introductory and intermediate courses cur- rently offered. Individual intensive study, with sched- uled meetings to be arranged between faculty mem- ber and student. Assigned reading and tangible evi- dence of mastery of subject matter required. May be repeated for credit. P/NP or letter grading.

178. Individual Studies in Southeast Asian. (4) Tu- torial, to be arranged. Limited to juniors/seniors and graduate students who desire more advanced or spe- cialized treatment of one language offered in program beyond introductory and intermediate courses cur- rently offered. Individual intensive study, with sched- uled meetings to be arranged between faculty mem- ber and student. Assigned reading and tangible evi- dence of mastery of subject matter required. May be repeated for credit. P/NP or letter grading.

181. Asian Languages and Cultures.
vanced topics. Broadening of skills in conversation and composition; reading of selected texts. P/NP or letter grading.

5. Intermediate Thai. (Formerly numbered Southeast Asian 61B.) Lecture, five hours. Enforced requisite: course 4 with grade of C or better. Reinforcement of basic Thai grammar and coverage of more advanced topics. Broadening of skills in conversation and composition; reading of selected texts. P/NP or letter grading.

6. Intermediate Thai. (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 Thai. (4-4-4) (Formerly numbered Southeast Asian 162A-162B-162C.) Lecture, three hours. Requisite: course 6 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. Requisite: course 6 or Thai placement test. Tutorial and guided independent study to help students develop advanced 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, two hours; discussion, three hours. Coverage of basic Vietnamese grammar, with equal emphasis on reading, writing, conversation, and comprehension. P/NP or letter grading.

2. Introductory Vietnamese. (5) (Formerly numbered Southeast Asian 50B.) Lecture, two hours; discussion, three hours. Enforced requisite: course 1 with grade of C or better. Coverage of basic Vietnamese grammar, with equal emphasis on reading, writing, conversation, and comprehension. P/NP or letter grading.

3. Introductory Vietnamese. (5) (Formerly numbered Southeast Asian 50C.) Lecture, two hours; discussion, three hours. Enforced requisite: course 2 with grade of C or better. Coverage of basic Vietnamese grammar, with equal emphasis on reading, writing, conversation, and comprehension. P/NP or letter grading.

4A. Introductory Vietnamese for Heritage Learners. (3) (Formerly numbered Southeast Asian 50FL.) Lecture, two 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.

4B. Introductory Vietnamese. (5) (Formerly numbered Southeast Asian 51A.) Lecture, two hours; discussion, three hours. Enforced requisite: course 3 with grade of C or better. Reinforcement of basic Vietnamese grammar and coverage of more advanced topics. Broadening of skills in conversation and composition; reading of selected texts. P/NP or letter grading.

5. Intermediate Vietnamese. (5) (Formerly numbered Southeast Asian 51B.) Lecture, two hours; discussion, three hours. Enforced requisite: course 4 with grade of C or better. Reinforcement of basic Vietnamese grammar and coverage of more advanced topics. Broadening of skills in conversation and composition; reading of selected texts. P/NP or letter grading.

6. Intermediate Vietnamese. (5) (Formerly numbered Southeast Asian 51C.) Lecture, two hours; discussion, three hours. Enforced requisite: course 5 with grade of C or better. Reinforcement of basic Vietnamese grammar and coverage of more advanced topics. Broadening of skills in conversation and composition; reading of selected texts. P/NP or letter grading.

7. 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.

8. Advanced Vietnamese Instruction in Vietnamese. (2) Tutorial, two hours. Requisite: course 6 or Vietnamese placement test. Tutorial and guided independent study to help students develop advanced proficiency in oral and written Vietnamese. May be repeated for credit. P/NP or letter grading.

9. Advanced Tutorial Instruction in Vietnamese. (2) Tutorial, two hours. Requisite: course 6 or Vietnamese placement test. Tutorial and guided independent study to help students develop advanced proficiency in oral and written Vietnamese. May be repeated for credit. P/NP or letter grading.

10. 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 language and culture required. Critical and historical examination of film and literary 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.

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 Vietnamese culture. Readings include both 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. Requisite: course 6 or Vietnamese placement test. Tutorial and guided independent study to help students develop advanced proficiency in oral and written Vietnamese. May be repeated for credit. P/NP or letter grading.

115FL. Readings in Vietnamese. (2) (Formerly numbered Southeast Asian 155FL) Seminar, two hours. Requisite: 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.

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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Robert G. Fovell, Ph.D., Chair

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Jochen P. Stutz, Ph.D.
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Yongxiang Xue, Ph.D.

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George L. Siscoe, Ph.D.
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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.
Lawrence W. Harding, Ph.D.
Duane E. Waliser, Ph.D.

Adjunct Assistant Professors
Wolfgang Buermann, Ph.D.
Aradhna K. Tripati, Ph.D.

Scope and Objectives
The atmospheric and oceanic sciences present a wide variety of problems of compelling scientific interest and increasing social concern. This is exemplified by efforts to improve air quality, degradations caused by severe storms and floods, attempts to control or modify weather phenomena, problems of long-range weather forecasts, climate change, and 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 other professions. Master of Science and Ph.D. degree holders work in universities, research centers, laboratories, and government services and, increasingly, in the rapidly burgeoning private sector.

Undergraduate Study

Atmospheric, Oceanic, and Environmental Sciences B.S.

Preparation for the Major
Required: Two courses from Atmospheric and Oceanic Sciences 1/1L, 2/2L, 3/3L; Chemistry and Biochemistry 1A and 14A, or 1B and 20B; Mathematics 3A, 3B, and 3C, or 31A, 31B, 32A, 32B, 33A, and 33B; Physics 1A or 1AH, 1B or 1BH, 1C or 1CH, 4AL, and 4BL, or 6A, 6B, and 6C; Program in Computing 10A.

Students interested in pursuing graduate studies in atmospheric and oceanic sciences or obtaining employment with the National Weather Service or other government agencies are strongly urged to select the Mathematics 31A through 33B sequence and the Physics 1 sequence.

Transfer Students
Transfer applicants to the Atmospheric, Oceanic, and Environmental Sciences major with 90 or more units must complete as many of the following introductory courses as possible prior to admission to UCLA: one year of calculus, one year of calculus-based physics with laboratory, one general chemistry course with laboratory for majors, and one C++ programming course.

Refer to the UCLA Transfer Admission Guide at http://www.admissions.ucla.edu/prospect/admissions/trans.htm for up-to-date information regarding transfer selection for admission.

The Major
Required: Four courses from Atmospheric and Oceanic Sciences 101, 102, 103, 104, M105, three additional upper division atmospheric sciences courses selected in consultation with the undergraduate advisers, and two upper division courses from a list of chemistry, mathematics, physics, and statistics courses selected in consultation with the undergraduate advisers.

Students preparing for graduate studies in atmospheric chemistry should take Chemistry and Biochemistry 20B, 103, Mathematics 115A, 136, Physics 131, 132; students preparing for graduate studies in upper atmosphere and space physics should take Mathematics 115A, Physics 110A, 110B, M122; students preparing for graduate studies in atmospheric dynamics and physics should take Atmospheric and Oceanic Sciences 101, M120, 125, Mathematics 115A, 136, Physics 131, 132.

Atmospheric and Oceanic Sciences Minor
The Atmospheric and Oceanic Sciences minor provides a formal vehicle for students specializing in other science fields to pursue interests in the atmospheric and oceanic environment. It is designed to be flexible, recognizing that many topics in this field cross traditional disciplinary boundaries.

To enter the minor, students must have an overall grade-point average of 2.0 or better and must make an appointment with a departmental undergraduate adviser for approval in selecting a coordinated program of courses from within the department and related disciplines. For further information, contact the department at (310) 825-1217.

Required Courses (28 units): Seven 4-unit courses, including (1) three from Atmospheric and Oceanic Sciences M100, 101, 102, 103, 104, M105, M106, C110, C115, M120, 125, 130, M140, 141, 145, 150, C160, C170, 180 and (2) four additional courses, two of which must be upper division, from any of the above atmospheric and oceanic sciences courses beyond the minimum four required or from Atmospheric and Oceanic Sciences 1, 2, 3, 186 (must be taken twice), Chemistry and Biochemistry 103, 110A, 110B, 113A, C113B, 114, Earth and Space Sciences 15, Ecology and Evolutionary Biology 109, C119, 122, 123A or 123B, 147, 148, Mathematics 115A, 115B, 132, 135, 136, 146, 170A, 170B, Physics 110A, 110B, 110D, 123A or 123B, 131, 132. Other relevant courses from related disciplines may be substituted with prior approval of the department. At least five courses approved for the minor must be upper division.

Groups of courses relevant to specific subareas of atmospheric sciences include (1) atmospheric chemistry: Atmospheric and Oceanic Sciences 104, M140, Chemistry and Biochemistry 103, 110A, 110B, C113B, 114; (2) atmospheric chemistry and biology: Atmospheric and Oceanic Sciences 101, 104, Ecology and Evolutionary Biology 108, C119, 122; (3) atmospheric dynamics: Atmospheric and Oceanic Sciences 101, 102, 125, Mathematics 115A, 115B, 132, 135, 136, 142, 146; (5) oceanography and biology: Atmospheric and Oceanic Sciences 101, 103, 104, Ecology and Evolutionary Biology 108, C119, 122; (6) upper atmosphere: Atmospheric and Oceanic Sciences 101, M120, 125, C170, Physics 110A, 110B, M122.

A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor.

One course may be taken on a Passed/Not Passed basis; each of the other minor courses must be taken for a letter grade, and students must have an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

Graduate Study
Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website, http://grad.ucla.edu/gasaa/official/programs.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 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.

Atmospheric and Oceanic Sciences

Lower Division Courses
1. Climate Change: From Puzzles to Policy. (4) Lecture, three hours; discussion, one hour. Overview of fundamentals of Earth’s climate, including greenhouse effect, water and chemical cycles, outstanding features of atmospheric and ocean circulation, and feedback between different system components. Ex-
citing and contentious scientific puzzles of climate system, including causes of ice ages, greenhouse warming, and of climate change and prediction to society, with emphasis on science's role in identifying, qualifying, and solving environmental problems such as ozone hole and greenhouse warming. P/N or letter grading.

1L. Climate Change: From Puzzles to Policy — Laboratory. (1) Laboratory, one hour. Enforced corequisite: course 1. Investigations and demonstrations supporting material in course 1, including greenhouse effect, atmospheric circulation, past, present, and future climates, and role of science in climate change politics. P/N or letter grading.

2. Air Pollution. (4) Lecture, three hours; discussion, one hour. Causes and effects of high concentrations of pollution in atmosphere. Topics include nature and sources of gaseous and particulate pollutants, their transport, dispersion, modification, and removal, with emphasis on atmospheric processes on scales ranging from individual sources to global effects; interaction with biosphere and oceans; stratospheric pollution. P/N or letter grading.

2L. Air Pollution Laboratory. (1) Laboratory, one hour. Enforced corequisite: course 2. Investigations and demonstrations supporting material in course 2, including box model simulation, dose responses, air parcel motion and pollution dispersion, daily and seasonal variations of smog pollutants, and smog transport. P/N or letter grading.


3L. Introduction to Atmospheric Environment Laboratory. (1) Laboratory, one hour. Enforced corequisite: course 3. Investigations and demonstrations supporting material in course 3, including causes and effects of seasons, remote sensing and satellite picture interpretation, atmospheric stability, and weather systems (fronts and cyclones). P/N or letter grading.

5. Climates of Other Worlds. (4) Lecture, three hours; discussion, one hour. Introduction to atmospheres of planets and their satellites in solar system using information from 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/N or letter grading.

M10. Introduction to Environmental Science. (4) (Same as Environment M110.) Lecture, three hours; laboratory, one hour. Introduces students to undergraduate course. 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. Lower Division Seminar. (4) Seminar, three hours. Variable topics; consult Schedule of Classes or department for topics to be offered in specific term. P/N or letter grading.

Upper Division Courses

M100. Earth and Its Environment. (4) (Same as Environment M111.) Lecture, three hours. Overview of Earth as system and planet, yet intimately related, physical and biological elements. Origins and characteristics of atmosphere, oceans, and land masses. Survey of history of Earth and of life on Earth, particularly in relation to evolution of physical world. Consideration of possibility of technological solutions to global environmental problems using knowledge gained during course. Letter grading.


102. Climate Change and Climate Modeling. (4) Lecture, three hours; discussion, one hour. Enforced requirements: Mathematics 3C or 32A, Physics 1B or 6C, with grades of C or better. Role of environmental issues in climate change due to human activities or natural climate variations. Quantitative introduction to new science of climate modeling to understand and predict these changes for our climate system. Atmospheric and oceanic circulation. El Niño and year-to-year climate prediction. Greenhouse effect and global warming. P/N or letter grading.


104. Fundamentals of Air and Water Pollution. (4) Lecture, three hours; discussion, one hour. Requisite: Chemistry 14B or 24B and Physics 1B or 6B. Chemistry and physics of air and water pollution, including photochemistry, acid rain, air pollution meteorology and dispersion, groundwater and surface water pollution, chemical cycling, air-water interface, global atmospheric change. Letter grading.

M105. Introduction to Chemical Oceanography. (4) (Same as Ecology and Evolutionary Biology M139.) 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 oceanic constituents, with focus on those that are most important for life (i.e., carbon, nitrogen, phosphorus). Investigation of primary production, export production, remineralization, diazgenesis, air-sea gas exchange processes. Letter grading.

M106. Applied Climatology: Principles of Climate Impact on Natural Environment. (4) (Same as Geography M106.) Lecture, three hours; discussion, one hour. Designed for juniors/seniors. Exploration of knowledge and tools to solve complex problems in contemporary applied climatology, including current practices, influence of climate on environment, and human influence on changing climates. P/N or letter grading.


C115. Mesometeorology. (4) Lecture, three hours. Requisite: course 101. Observations of phenomena with length scales ranging from 20 km to 2,000 km. Topics include polar lows, airmass thunderstorms, multicell storms, supercell tornadoes, gust fronts, downbursts, microbursts, and dry line. Discussions on design of field project. Concurrently scheduled course C228. P/N or letter grading.

M120. Introduction to Fluid Dynamics. (4) (Same as Earth and Space Sciences M140.) Lecture, three hours; discussion, one hour. Corequisite: Physics 131, Fluids statics and thermodynamics, kinematics, conservation laws and equations of fluid motion. Circulation theorems and vorticity dynamics. Rotating frames, introduction to vorticity. Letter grading.


130. California’s Ocean. (4) Lecture, four hours. Recommended requisite: course 103 or M105. Circulation, biogeochemistry, biota, water quality, measurement techniques, computational modeling, conservation, and management for California’s coastal ocean, including coastal measurement cruise and term project (paper and presentation). Letter grading.

M140. Environmental Chemistry Laboratory. (4) (Same as Chemistry M140.) Lecture, two hours; laboratory, three hours. Requisite: Chemistry 20B. Laboratory experience for students who wish to pursue careers 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/N or letter grading.


145. Atmospheric Physics: Radiation, Clouds, and Aerosols. (4) Lecture, three hours; discussion, one hour. Requisites: Physics 1A, 1B, and 1C, or 6A, 6B, and 6C. Theory and application of atmospheric radiation, aerosol, and cloud processes. Topics include radiative transport, cloud and rain formation, aerosol properties, impact of aerosol and clouds on climate. Letter grading.

150. Atmospheric and Oceanic Sciences Laboratory. (5) Lecture, one hour; laboratory, six hours. Requisites: Mathematics 3B or 31B, Physics 1B and 1C (or 6B and 6C). Many of today’s environmental problems such as stratospheric ozone holes and rise of greenhouse gas concentrations, and various severe weather phenomena, were first discovered and investigated using accurate observational techniques. Direct experimental observations remain crucial component in today’s efforts to better understand weather, climate, and pollution of atmosphere and ocean. Introduction to experimental/observational approach in atmospheric and oceanic sciences. Students work in small groups to gain hands-on experience in setup, performance, analysis, and reporting of different experimental introduction to applying principles of these experimental methods and basic data analysis tools. P/N or letter grading.

155. Introduction to Ecosystem-Atmosphere Interactions. (4) Lecture, three hours; discussion, one hour. Exchanges of energy, moisture, atmospheric trace gases, and momentum between terrestrial ecosystems and atmosphere. Interactions and feedbacks between physical environment and physiological status of plants and soils. Topics include canopy structure and function, leaf energy balance, and carbon and water fluxes between plants, soils, and atmosphere. Letter grading.

C160. Remote Sensing. (4) Lecture, three hours. Requisites: Physics 1C, 1D, or 1E, and one of the following: Electromagnetics of remote sensing; atmospheric spectroscopy; methods based on scattering, absorption, and extinction;
passive and active techniques; inversion methods; remote sensing of terrestrial meteorological parameters and their satellites. Remote sensing of planetary atmosphere. Concurrently scheduled with course C240B. P/N/P or letter grading.


197. Individual Studies in Atmospheric and Oce- anic Sciences. (2 to 4) Tutorial, to be arranged. Limited to juniors/seniors. Individual intensive study with scheduled meetings to be arranged between faculty mem- ber and student. Assigned reading and tangible evi- dence of mastery of subject matter required. May be repeated for credit. Individual contract required. P/N/P or letter grading.

199. Directed Research in Atmospheric and Oce- anic Sciences. (2 to 4) Tutorial, to be arranged. Lim- ited to juniors/seniors and required for Mathematics/Oceanic and Atmospheric Sciences majors. Super- vised individual research or investigation under guid- ance of faculty mentor. Culminating paper or project required. May be repeated for credit. Individual contract required. P/N/P or letter grading.

Graduate Courses


200B. Introduction to Dynamics of Earth System. (4) Lecture, three hours. Overview of general circula- tion of atmosphere and ocean; global energy balances; coupled circulations (such as el niño); mesoscale, synoptic, and tropical phenomena; boundary layers, clouds, and convection; biogeochemical cycles; climate variability. Letter grading.


201C. Atmospheric and Oceanic Turbulence. (4) Lecture, three hours. Requisite: course 200A. Re- quires: course 200A or consent of instructor. Wave flows that occur over relatively small scales (~10 km) in both atmosphere and ocean. Classical homogeneous, shear, convect- ive, and boundary-layer turbulence and its geophysi- cal dynamics due to stratification, Earth’s rotation, and water phase changes. S/U or letter grading.


202A. Introduction to Ocean Chemistry. (4) (Same as Civil Engineering M262A.) Lecture, three hours; discussion, one hour. Requisite: course 202B. Principles of chemical kinetics, thermochemistry, spectroscopy, and photochemistry; chemical composi- tion and history of Earth’s atmosphere; biogeo- chemical cycles; chemistry of the oceans; basic bio- chemical photophysics of troposphere and stratosphere, upper atmosphere chemical processes; air pollution; chemistry and climate. S/U or letter grading.

202B. Introduction to Marine Chemistry. (4) Lecture, three hours; discussion, one hour. Principles of radiative transfer; absorption, emission, and scat- tering of solar and infrared radiation; radiation budget concepts; aerosols in atmosphere; principles of water droplet and ice crystal formation; diffusion and accretion; 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, in- terplanetary, magnetospheric, ionospheric, auroral, geomagnetic phenomenological and theoretical back- ground for studies in space physics. Contextual understanding and literacy in space physics terminol- ogy provided. S/U (for majors with consent of instruc- tor after successful completion of written and oral comprehensive examination and for nonmajors at discretion of major department) or 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 mor- phology, circulations, and disturbances; ionospheres as collisional and magnetized (unmagnetized) plas- mas: electron densities. Examples of upper atmospheric interaction with lower atmosphere and magnetosphere. S/U (for majors with consent of instruc- tor after successful completion of written and oral comprehensive examination and for nonmajors at discretion of major department) or letter grading.

206. Introduction to Biophysical Modeling of Land Surface Processes and Land/Atmosphere In- teractions. (4) (Same as Geography M206.) Lecture, two hours; laboratory, one period; one hour. Designed for graduate students. Presentation of introductory knowledge for graduate students to un- derstand nature, principles, and scope of biophysical modeling of land surface processes, including idealized models. Meteorology and CO₂ fluxes, transfer, and satellite data application. Laboratory sessions in- cluded. S/U or letter grading.

Dynamic and Synoptic Meteorology


212A. Numerical Methods in Geophysical Fluid Dy- namics. (4) Lecture, three hours. Requisite or corre- quisite: course 201B. Methods for solving initial- and boundary-value problems in fluid dynamics, with emphasis on applications to atmospheric and ocean- ographic problems. Finite-difference methods and truncation error. Linear and non-linear computational instability. Computational models and computational boundary conditions. Nonlinear shallow-water equa- tion 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.

212B. Numerical Modeling of Atmosphere I. (4) Lecture, three hours. Requisites: courses 201B, 212A. Dynamics of numerical weather prediction and cli- matic models and their computational design. Basic governing equations. Vertical and horizontal coordi- nates. One- and two-dimensional models. Shal- low-water equation model. Three-dimensional primi- tive equation models. Limited-area modeling. S/U (for majors with consent of instructor after successful completion of written and oral comprehensive examination and for nonmajors at discretion of major department) or letter grading.


215. Ocean Circulation. (4) Lecture, three hours. Requisites: courses 200A, 201A. Phenomena, theory, and modeling of ocean circulation with global to re- gional scope. Circulation types include thermohaline and wind-driven currents. Examination of relation-
ships between ocean circulation and smaller-scale motions, atmospheric climate, and biogeochemical transport. Development of consistent observational techniques for air pollution studies, to include pollution dispersion in complex urban and rural environments; meteorological factors, air pollution potential; ecological aspects of air pollution. S/U (for majors with consent of instructor after successful completion of written and oral comprehensive examination and for nonmajors at discretion of major department) or letter grading.

C227. Advanced Dynamic and Synoptic Meteorology. (6) Laboratory, six hours. Requisite: course 101. Weather map analysis, thermodynamic diagrams, satellite interpretation, severe weather forecasting, isentropic analysis, and geostrophic omega equation. Concurrently scheduled with course C110. 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.

C228. Mesometeorology. (4) Lecture, three hours. Requisite: course 101. Observations of phenomena within large scales ranging from 20 km to 2,000 km. Topics include polar low, cut-off lows, cyclones, mesoscale synoptic features, mesoscale precipitation, and mesoscale turbulence. S/U or letter grading.


220. Dynamics of Atmosphere/Ocean System. (4) Lecture, three hours. Requisite: course 201. Theoretical and experimental approaches to coupling between atmosphere and ocean; wind-driven ocean currents; coastal upwelling. Air-sea interactions. Effects of ocean on climate. S/U (for majors with consent of instructor after successful completion of written and oral comprehensive examination and for nonmajors at discretion of major department) or letter grading.

221. Geophysical Turbulence. (4) Lecture, three hours. Requisites: courses 202A, 201A. Phenomena, theory, and modeling of turbulence in Earth’s oceans and atmosphere, with application to planetary scale motions. Regimes of turbulence include homogeneous flows in two and three dimensions, shear flows, convection, stably stratified flows, and geophysical motions. 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.

224A. Atmospheric Diffusion and Air Pollution. (4) (Same as Civil Engineering M228B.) Lecture, three hours. Nature and sources of atmospheric pollution; diffusion from point, line, and area sources; pollution dispersion in urban complexes; meteorological factors and air pollution potential; ecological aspects of air pollution. S/U (for majors with consent of instructor after successful completion of written and oral comprehensive examination and for nonmajors at discretion of major department) or letter grading.

234B. Cloud and Precipitation Physics II. (4) Lecture, three hours. Requisite: course 223A. 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 coalescence. 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.

235. Ocean Biogeochemical Dynamics and Climate. (4) (Same as Ecology and Evolutionary Biology M238B.) Lecture, three hours. Interaction of ocean biogeochemical cycles with physical climate system. Biogeochemical processes control carbon dioxide and oxygen in oceans and atmosphere over timescales from few million years to several years. Anthropogenic perturbation of global carbon cycle and climate. Response of ocean ecosystems to past and future global changes. Use of isotopes to study ocean biogeochemical cycles and climate. Interactions between biogeochemical cycles on land and in ocean. S/U or letter grading.

240A. Radar Meteorology. (4) Lecture, three hours. Radar detection of spherical and nonspherical particles; use of radar in studying size distributions of cloud and precipitation particles, precipitation intensities, storm structure, updraft and downdrafts, mesoscale organization, and atmospheric turbulence. Use of radar to measure wind speed, and turbulence; radar observations of convective clouds, thunderstorms, tornadoes, hurricanes, squall lines, and fronts; clear air echoes. S/U (for majors with consent of instructor after successful completion of written and oral comprehensive examination and for nonmajors at discretion of major department) or letter grading.

240B. Remote Sensing. (4) Lecture, three hours. Requisites: Physics 1C or 6B. Theory and techniques of remote sensing; atmospheric spectroscopy; methods based on scattering, absorption, and extinction; passive and active techniques; inversion methods; remote sensing of terrestrial meteorological parameters and trace constituents; remote sensing of surfaces and biosphere; remote sensing of planetary atmospheres. Concurrently scheduled with course C160. S/U (for majors with consent of instructor after successful completion of written and oral comprehensive examination and for nonmajors at discretion of major department) or letter grading.

244A. Atmospheric Radiation. (4) Lecture, three hours. Requisite: course 201B. Presentation of computational methods for solar and thermal infrared radiative fluxes and heating rates in clear, aerosol, and cloudy atmospheres for climate studies. Topics include line-by-line and correlated k-distribution methods for treating gaseous absorption, simplified methods for radiative transfer in Rayleigh and Lorenz/Mie atmospheres, and global radiative equilibrium. Use of user-friendly computer code required to perform calculations of radiative fluxes and heating rates in various atmospheric conditions for climate applications. S/U or letter grading.


Upper Atmosphere and Space Physics

magnetospheres and to solar wind/magnetosphere/ionosphere coupling. S/U (for majors with consent of instructor) for successful completion of written and oral comprehensive examination and for nonmajors at discretion of major department) or letter grading.

250B. Solar System Microscopic Plasma Processes. (4) Lecture, three hours. Requisite: course C205A. Adiabatic charged particle dynamics; incoherent radiation processes; collective effects in plasma; propagation characteristics of electrostatic and electromagnetic waves; introduction to resonant interaction between charged particles and plasma waves. S/U (for majors with consent of instructor after successful completion of written and oral comprehensive examination and for nonmajors at discretion of major department) or letter grading.

256. Ionospheric Electrodynamics. (4) Lecture, three hours. Ionospheric structure, currents, and electric fields; equatorial and high-latitude ionospheres; ionospheric control of magnetospheric phenomena. S/U (for majors with consent of instructor after successful completion of written and oral comprehensive examination and for nonmajors at discretion of major department) or letter grading.

257. Radiation Belt Plasma Physics. (4) Lecture, three hours. Requisite: course 250B. Turbulent plasma instabilities and their relation to satellite observations and magnetospheric structure. Processes responsible for space, local, and transport of energetic radiation belt particles. S/U (for majors with consent of instructor after successful completion of written and oral comprehensive examination and for nonmajors at discretion of major department) or letter grading.


Special Studies

270. Seminar: Atmospheric Sciences. (2) Seminar, one hour. May be repeated for credit. S/U or letter grading.

271. Seminar: Atmospheric Dynamics. (2) Seminar, one hour. May be repeated for credit. S/U or letter grading.


273. Seminar: Atmospheric Physics. (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 connection, 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 speciality 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.


tion 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. With these courses and a strong emphasis on research, 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 projects in written and oral format, and team competition.

Bioengineering B.S.

Capstone Major

Preparation for the Major

Required: Preengineering 10; Chemistry and Biochemistry 20A, 20B, 20L, 30A, 30AL, 30B, 30BL; Computer Science 31; Life Sciences 2 (satisfies HSSCE 3E; life sciences requirement), 3, 4, 23L; Mathematics 31A, 31B, 32A, 32B, 33A, 33B; Physics 1A, 1B, 1C, 4AL, 4BL.

The Major

Required: Bioengineering 100, C106, 110, 120, 165E (or Engineering 183E or 185E), 167L, 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; two capstone design courses (Bioengineering 177A, 177B); and three major field elective courses (12 units) from Bioengineering C101, CM102, CM103, C104, C105, C131, CM140, CM145, C147, CM150, CM150L, C170, C171, CM178, C179, 180L, 181, 181L, C183, C185, CM186, CM187, 199 (8 units maximum).

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.

**Biomaterials and Regenerative Medicine:** Bioengineering C104, C105, CM140, C147, C183, C185, 199 (8 units maximum), Materials Science and Engineering 104, 110, C111, 120, 130, 132, 140, 143A, 150, 151, 160, 161. The above materials science and engineering courses may be used to satisfy the technical breadth requirement.

**Biomedical Devices:** Bioengineering C131, C172, 199 (8 units maximum), Electrical Engineering 102, CM150 (or Mechanical and Aerospace Engineering CM180). Mechanical and Aerospace Engineering C187L. The electrical engineering or mechanical and aerospace engineering courses listed above may be used to satisfy the technical breadth requirement.

For Bioengineering 199 to fulfill a track requirement, the research project must fit within the scope of the track field, and the research report must be approved by the supervisor and vice chair.

For information on University and general education requirements, see the College and Schools 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://grad.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 Bioengineering Department offers Master of Science (M.S.) and Doctor of Philosophy (Ph.D.) degrees in Bioengineering.

**Bioengineering**

**Lower Division Course**

10. Introduction to Bioengineering. (2) Lecture, two hours; discussion, one hour; outside study, three hours. Preparation: high school biology, chemistry, mathematics, physics. Introduction to scientific and technological bases for established and emerging subfields of bioengineering, including biosensors, bioinstrumentation, and bio signal processing. Biochemical chimeras, 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.


CM102. Basic Human Biology for Bioengineers I. (4) (Formerly numbered Biomedical Engineering C102.) Lecture, three hours; laboratory, two hours. Preparation: human molecular biology, biochemistry, and cell biology. Not open for credit to Physiological Science majors. Open to nonmajors. Survey of fundamental principles to address problems at the interface of biology and engineering and to develop innovative bioengineering solutions to meet specific design criteria. Concurrently scheduled with course CM202. Letter grading.


C104. Physical Chemistry of Biomacromolecules. (4) (Formerly numbered M104.) Lecture, three hours; discussion, two hours; outside study, seven hours. Requisites: Chemistry 20A, 20B, 30A, Life Sciences 2, 3, 23L. To understand biological materials 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 physical chemistry. Investigation 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, solution of charged species, and separation and characterization of biomacromolecules. Concurrently scheduled with course C204. Letter grading.

C105. Engineering of Bioconjugates. (4) (Formerly numbered M105.) Lecture, three hours; discussion, one hour; outside study, seven hours. Requisites: Chemistry 20A, 20B, 20L. Highly recommended: one organic chemistry course. Bioconjugate chemistry is science of covalently linking 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 concepts of chemical ligation, including choice and design of 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 specific sample applications. Concurrently scheduled with course C205. Letter grading.

C106. Topics in Biophysics, Channels, and Membranes. (4) (Formerly numbered M106.) Lecture, three hours; discussion, one hour; outside study, eight hours. Requisites: Physics 33B, Physics 1C, 4AL, 4BL. Coverage in depth of physical processes associated with biological membranes and ion channel proteins, with specific emphasis on cell physiology. 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, Donnan equi-

C107. Polymer Chemistry for Bioengineers. (4) (Formerly numbered M107.) Lecture, four hours; discussion, one hour; outside study, seven hours. Enforced requisites: course 182A. Introduction to molecular chemistry, including polymer chemistry, synthesis route on polymer properties. Lectures include both theory and practical issues demonstrated through examples. Concurrently scheduled with course C207. Letter grading.

110. Biotransport and Bioreaction Processes. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Enforced requisites: course 100. Mathematics 33B. Analysis of fluid flow, heat transfer, mass transfer, binding events, and biochemical reaction systems in interest to bioengineers. Understanding of different basic types of biomolecules, with emphasis on nucleic acids, proteins, and lipids. Study of how biological and biomimetic systems organize into their functional forms via self-assembly, self-replication, and bio-inspired biological function. Illustration of these ideas using examples from bioengineering and biotechnical engineering. Concurrently scheduled with course C139A. Letter grading.

CM140. Introduction to Biomechanics. (4) (Formerly numbered Biomedical Engineering CM140) (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 adaption 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 C247L. Letter grading.

CM145. Molecular Biotechnology for Engineers. (4) (Formerly numbered Biomedical Engineering CM145) (Same as Chemical Engineering CM145) Lecture, four hours; discussion, one hour; outside study, seven hours. Enforced requisites: course CM102, Chemistry 20A, 20B, 20L, Life Sciences 3, 23L. Selected topics in molecular biology that form foundation of biotechnology and biomedical industry today. Topics include recombinant DNA technology, molecular research tools, manipulation of gene expression, directed mutagenesis and protein engineering, DNA-based diagnostics and DNA microarrays, antibody and protein-based diagnostics, genomics and proteomics, gene therapy, and tissue engineering. Concurrently scheduled with course C245. Letter grading.

C147. Applied Tissue Engineering: Clinical and Industrial Perspective. (4) (Formerly numbered Bio- medical Engineering C147) Lecture, three hours; discussion, two hours; outside study, seven hours. Enforced requisites: course CM102, Chemistry 20A, 20B, 20L, Life Sciences 3. Overview of central topics of tissue engineering, with focus on how to build artificial tissues into regulated clinically viable products. Topics include biomaterials selection, cell source, delivery methods, FDA requirements, and physical and chemical testing. Case studies include skin and artificial skin, bone and cartilage, blood vessels, neurotissue engineering, and liver, kidney, and other organs. Offered with 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.

CM150. Introduction to Micromachining and Microelectromechanical Systems (MEMS). (4) (Formerly numbered Biomedical Engineering CM150) (Same as Electrical Engineering and Computer Science CM150) Lecture, four hours; discussion, one hour; outside study, seven hours. Enforced requisites: course CM102, Chemistry 20A, 20L, Physics 1A, 1B, 1C. Overview of microtechnologies and microelectromechanical systems (MEMS) theory and principles of MEMS fabrication, including microfabrication and microactuators. Students design microfabrication processes capable of achieving desired MEMS device. Concurrently scheduled with course C230A. Letter grading.

CM150L. Introduction to Micromachining and Microelectromechanical Systems (MEMS) Laboratory. (2) (Formerly numbered Biomedical Engineering CM150L) (Same as Electrical Engineering and Computer Science CM150L) Lecture, one hour; laboratory, four hours; outside study, one hour. Requisites: course CM150, Chemistry 20A, 20L, Physics 1A, 1B, 1C, 4A, 4BL. Hands-on introduction to micromachining, microtechnologies, and microelectromechanical systems (MEMS) laboratory. Methods of micromachining and how these methods can be used to produce variety of MEMS, including microstructures, micromotors, and microvalves. Students design process of fabricating MEMS device. Concurrently scheduled with course CM250L. Letter grading.

165EW. Bioengineering Ethics. (4) Lecture, four hours; discussion, two hours; outside study, five hours. All professions have ethical rules that derive from moral theory. Bioethics is well-established discipline that addresses ethical problems about life, such as when do fertilized eggs become people? Should ending of life ever be assisted? At what cost should it be maintained? Unlike physicians, bioengineers do not make these decisions in practice. Engineering ethics addresses ethical problems about producing devices from molecules to bridges, such as when do concerns about risk outweigh concerns about cost? When are weapons too dangerous to design? At what point does benefit of committing to building devices outweigh need to wait for more scientific confirmation of their effectiveness? Bioengineers must be aware of consequences of applying such devices to all living systems. Emphasis on ethical issues with regard to bioengineering environments. Satisfies engineering writing requirement. Letter grading.

167L. Bioengineering Laboratory. (4) (Formerly numbered 182L.) Lecture, two hours; laboratory, six hours; outside study, two hours. Corequisite: course C170. Enforced requisites: course CM102, Chemistry 20L. Laboratory experiments in fluorescence microscopy, bioconjugation, soft lithography, and cell culture culminate in design of engineered surface for cell growth. Includes use of microscopes and microscopes in laboratories and their underlying physical or chemical properties. Case studies connect laboratory techniques to current biomedical engineering research and reinforce experimental design skills. Letter grading.

C170. Energy-Tissue Interactions. (4) (Formerly numbered Biomedical Engineering C170) Lecture, three hours; outside study, nine hours. Requisites: Electrical Engineering 172, 175, Life Sciences 3, 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-tissue interactions. Concurrently scheduled with course C270. Letter grading.

C170L. Introduction to Techniques in Studying Laser-Tissue Interaction. (2) (Formerly numbered Biomedical Engineering C170L) Laboratory, four hours; outside study, two hours. Corequisite: course C170. Introduction to methodologies used in studying laser-tissue interactions. Topics include computer simulations of light propagation in tissues, measuring absorption spectra of tissue/bio- samples, making tissue phantoms, determining optical properties of different tissues, techniques of temperature distribution measurements. Concurrently scheduled with course C270L. Letter grading.

C171. Laser-Tissue Interaction II: Biologic Spectroscopy. (4) (Formerly numbered Biomedical Engineering C171) Lecture, four hours; outside study, eight hours. Requisite: course C170. Designed for students interested in techniques used in laser-tissue interaction studies. Introduction to optical spectroscopy principles, design of spectroscopic measurement devices, optical properties of tissues, and fluorescence spectroscopic techniques. Offered with prerequisites currently scheduled with course C271L. Letter grading.

C172. Design of Minimally Invasive Surgical Tools. (4) (Formerly numbered M172.) Lecture, three hours; discussion, two hours; outside study, four hours. Requisites: Chemistry 30B, Life Sciences 2, 3, 23L, Mathematics 32A. Introduction to design principles and engineering concepts used in design and manufacture of tools for minimally invasive surgery. Covers FDA regulatory policy and surgical procedures.
Topics include optical devices, endoscopes and laparoscopes, biopsy devices, laparoscopic tools, cardiovascular devices, and diagnostic radiology devices, orthopedic instrumentation, and integration of devices with therapy. Examination of complex process of tool design, fabrication, testing, and validation. Preparation of drawings and consideration of development of new and novel devices. Concurrently scheduled with course C272. Letter grading.

176. Principles of Biocompatibility. (4) Lecture, four hours; discussion, two hours; outside study, six hours. Enrollment limited to course 100. Electrical Engineering 1 or Physics 1C, Mathematics 33B. Biocompatibility at systemic, tissue, cellular, and molecular levels. Biomechanical compatibility, stress/strain constitutive equations, cellular and molecular response to mechanical signals, biochemical and cellular compatibility, immune response. Letter grading.

177A. Bioengineering Capstone Design I. (4) Formerly numbered 182B.) Lecture, two hours; laboratory, six hours; discussion, two hours; outside study, four hours. Enforced requisites: course 177A. Lectures, seminars, and discussions on aspects of biomedical device and therapeutic design, including topics such as need finding, intellectual property, entrepreneurship, regulation, and project management. Working in teams, students develop innovative solutions to address current problems in medicine and biology. Sourcing and ordering of materials and supplies relevant to student projects. Exploration of different experimental and computational methods. Scientific presentation of progress. Letter grading.

177B. Bioengineering Capstone Design II. (4) Formerly numbered 182D.) Lecture, two hours; laboratory, six hours; outside study, four hours. Enforced requisites: course 177A. Lectures, seminars, and discussions on aspects of biomedical device and therapeutic design, including meetings with scientific/clinical advisers and guest lectures from scientists in industry. Working in teams, students develop innovative solutions to real-world problems in medicine and biology. Students conduct directed experiments and computational modeling, give oral presentations, write reports, and participate in bioengineering design competition. Letter grading.

CM178. Introduction to Biomaterials. (4) Formerly numbered Biomedical Engineering CM180.) (Same as Materials Science CM180.) Lecture, three hours; discussion, two hours; outside study, seven hours. Enforced requisites: Mathematics 104. Engineering materials used in medicine and dentistry for repair and/or restoration of damaged natural tissues. Topics include relationships between material properties and disease state or tissue response, surface science, chemical design, tissue culture and biocompatibility, and processing and treatment methods, and bio-compatibility. Concurrently scheduled with course CM278. Letter grading.

C179. Biomaterials-Tissue Interactions. (4) Formerly numbered Biomedical Engineering C181.) Lecture, three hours; outside study, nine hours. Enforced requisites: course CM178. In-depth exploration of host cellular response to biomaterials: vascular response, interface, interaction, and clotting, biocompatibility, animal models, inflammation, infection, extracellular matrix, cell adhesion, and role of mechanical forces. Concurrently scheduled with course CM278. Letter grading.

180. System Integration in Biology, Engineering, and Medicine I. (4) Lecture, three hours; discussion, two hours; outside study, seven hours. Enforced requisites: courses 100, 110, 120, Life Sciences 3, Physics 4BLL, 4BL. Part I of two-part series. Molecular basis of normal physiology and pathophysiology, and engineering design principles of cardiovascular and pulmonary systems. Fundamental engineering principles of selected medical therapeutic devices. Letter grading.

180L. System Integration in Biology, Engineering, and Medicine I Laboratory. (4) Lecture, one hour; laboratory, four hours; clinical visits, four hours; outside study, four hours. Hands-on experimentation and clinical applications of selected medical therapeutic devices associated with cardiovascular and pulmonary disorders. Letter grading.

181. System Integration in Biology, Engineering, and Medicine II. (4) Lecture, three hours; discussion, two hours; outside study, seven hours. Enforced requisites: course 180L. Corequisites: course 181L. Part II of two-part series. Nerve, muscle and skeletal 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 181L. 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.

C183. Targeted Drug Delivery and Controlled Drug Release. (4) Formerly numbered M183.) Lecture, three hours; discussion, two hours; outside study, seven hours. Enforced requisites: Chemistry 20A, 20B, 20L. New techniques for understanding of modern biology, physiology, biomaterials, and engineering. Targeted delivery of genes and drugs and their controlled release are important treatment of challenging dis-sorders related 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 rational guidelines for design of novel drug delivery systems that can provide spatial and temporal control of drug release. Introduction to biotechnologies with specialized structural and interfaceal properties. Exploration of both chemistry of materials and physical presentation of devices and compounds used in delivery system. Concurrently scheduled with course C283. Letter grading.

M184. Introduction to Computational and Systems Biology. (2) Formerly numbered Biomedical Engineering M184.) (Same as Computational and Systems Biology M184 and Computer Science M184.) Lecture, two hours; outside study, four hours. Enforced 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 at interested students with different backgrounds. Students learn tools and techniques used by students with computational and systems biology interests. Presentations by individual UCLA researchers discussing their active computational and systems biology research. P/N grading. May be repeated for credit with topic or instructor change. Letter grading.

C185. Introduction to Tissue Engineering. (4) Formerly numbered Biomedical Engineering C185.) Lecture, three hours; discussion, one hour; outside study, eight hours. Enforced requisites: course CM102 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: growth factors, biological scaffolds, and molecular signals. Concurrently scheduled with course C285. Letter grading.

CM186. Computational Systems Biology: Modeling and Simulation of Biological Systems. (4) Formerly numbered Biomedical Engineering CM186.) (Same as Computational and Systems Biology M186 and Computer Science CM186.) Lecture, four hours; laboratory, four hours; clinical visits, eight hours. Corequisite: Electrical Engineering 102. Dynamic bio-systems modeling and computer simulation methods for studying biological/biomedical processes and systems at multiple levels. Concepts from multicomponent, 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 biomodeling goals and data into mathematical models and computational and analysis. Basics of numerical simulation algorithms, with modeling software exercises in class and PC laboratory assignments. Concurrently scheduled with course CM286. Letter grading.

C191. Research Communication in Computational and Systems Biology. (2 to 4) Formerly numbered Biomedical Engineering CM187.) (Same as Computational and Systems Biology M187 and Computer Science CM187.) Lecture, two hours; outside study, eight hours. Enforced requisites: course CM186. Closely directed, interactive, and real research experience in active quantitative systems biology research laboratory. Direction on how to focus interest in scientific community, appropriate to student interests and capabilities. Critiques of oral presentations and written progress reports explain how to proceed with search for research results. Major emphasis on effective research reporting, both oral and written. Concurrently scheduled with course CM287. 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. Enforced requisites: course CM219. May be repeated 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 and interested in research projects. Students are introduced to computational and systems biology in research. 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.

Graduate Courses

C201. Engineering Principles for Drug Delivery. (4) Formerly numbered Biomedical Engineering C201.) Lecture, four hours; discussion, one hour; outside study, seven hours. Enforced requisites: Mathematics 33B, Physics 1B. Application of engineering principles for designing and understanding drug delivery systems. Both theoretical and experimental approaches in studying biomedical processes and research in drug delivery. Application of engineering principles (diffusion, transport, kinetics) to problems in drug formulation and delivery to establish rational guidelines for design of novel drug delivery systems that can provide spatial and temporal control of drug release. Introduction to biotechnologies and techniques used in drug delivery system. Concurrently scheduled with course CM286. Letter grading.


CM202. Basic Human Biology for Bioengineers II. (4) Formerly numbered Biomedical Engineering CM202.) Lecture, three hours; laboratory, two hours; outside study, seven hours. Enforced requisites: Materials 33B, Physics 1B. Application of engineering principles for designing and understanding drug delivery systems. Both theoretical and experimental approaches in studying biomedical processes and research in drug delivery. Application of engineering principles (diffusion, transport, kinetics) to problems in drug formulation and delivery to establish rational guidelines for design of novel drug delivery systems that can provide spatial and temporal control of drug release. Introduction to biotechnologies and techniques used in drug delivery system. Concurrently scheduled with course CM102. Letter grading.

CM203. Basic Human Biology for Bioengineers III. (4) Formerly numbered Biomedical Engineering CM203.) Lecture, three hours; laboratory, two hours; preparation, two hours. Enforced requisites: 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/tis- sue) to system basis, with particular emphasis on molecu- lar basis. Modeling/simulation of functional aspects of biological system included. Actual demonstrations are performed to provide hands-on experience with biomedical facilities. Concurrently scheduled with course CM102. Letter grading.

C204. Physical Chemistry of Biomacromolecules. (4) (Formerly numbered Biomedical Engineering C204.) Lecture, three hours; discussion, two hours; outside study, seven hours. Requisites: Chemistry 20A, 20B, 20C, 32A, 32B, 23A, 23B, 23C, 23D, 43B, 34A, 34B. Coverage in depth of physical processes associated with biological mem- branest and chain proteins, with specific emphasis on electron density, atomic, and van der Waals physical principles. Emerging 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. Letter grading.

C205. Engineering of Bioconjugates. (4) (Formerly numbered Biomedical Engineering C205.) Lecture, four hours; discussion, one hour; outside study, seven hours. Enforced requisites: Chemistry 20A, 20B, 20C. Highly recommended: one year of organic chemistry coursework. Bioconjugate chemistry is science of coupling bio- molecules for wide range of applications. Oligonucleo- sides may be coupled to one surface in gene chip, or one protein may be coupled to one polymer to en- hance its stability in serum. Wide variety of bioconju- gates are used in delivery of pharmaceuticals, in sen- sors, in medical diagnostics, and in tissue engineer- ing. Key concepts of chemical ligation, including choice and design of conjugate linkers depending on type of biomolecule and desired application, such as degradable versus nondegradable linkers. Presenta- tion and discussion of design and synthesis of bio- synthetic conjugates for some sample applications. Concurrently scheduled with course C105. Letter grading.

C206. Topics in Biophysics, Channels, and Mem- branest. (4) (Formerly numbered Biomedical Engineering C206.) Lecture, three hours; discussion, one hour; outside study, eight hours. Enforced requisites: Chemistry 20A, 20B, 20C, 32A, 32B, 23A, 23B, 23C, 43B, 34A, 34B. Coverage in depth of physical processes associated with biological mem- branest and chain proteins, with specific emphasis on electron density, atomic, and van der Waals physical principles. Emerging 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. Letter grading.

C207. Polymer Chemistry for Bioengineers. (4) (Formerly numbered Biomedical Engineering C207.) Lecture, three hours; discussion, one hour; outside study, seven hours. Requisite: course C204 or C205. Fundamental concepts of polymer synthesis, including step-growth, chain growth (ionic, radical, metal catalysis); and ring-opening, with focus on factors that can be used to control chain length, chain length distribution, and chain-end functionality, chain copo- lymerization, and stereoregularity in polymerizations. Presentation of use of different polymerization techniques. Concepts of step-growth, chain growth, ring-opening, and coordinate polymerization, and effects of synthesis route on polymer prop- erties. Requisite: course C204 or C205. Letter grading.


M215. Biochemical Reaction Engineering. (4) (Formerly numbered Biomedical Engineering M215.) Lecture, four hours; discussion, one hour; outside study, seven hours. Requisite: Chemical Engineering 101C. Use of previously learned concepts of biophysical chemistry, thermodynamics, transport phenomena, and reaction kinetics to develop tools needed for technical design and economic analysis of biological reactors. Letter grading.

M217. Biomedical Imaging. (4) (Formerly numbered Biomedical Engineering M217.) (Same as Electrical Engineering M217.) Lecture, three hours; outside study, nine hours. Requisite: Electrical Engineering 114 or 211A. Optical imaging modalities in biomed- icine. Other nonoptical imaging modalities discussed briefly for comparison purposes. Letter grading.

M219. Principles and Applications of Magnetic Resonance Imaging. (4) (Formerly numbered Bio- medical Engineering M219.) (Same as Biomedical Physics M219.) Lecture, three hours; discussion, one hour. Basic principles of magnetic resonance (MRI), physics, and image formation. Emphasis on hard- ware, Bloch equations, analytic expressions, image contrast mechanisms, spin and gradient echoes, Fou- rier transform imaging methods, structure of pulse se- quences, and various scanning parameters. Introduc- tion to advanced techniques in rapid imaging, quanti- tative imaging, and functional imaging and their applications. Letter grading.

220. Introduction to Medical Informatics. (2) (Formerly numbered Biomedical Engineering 220.) Lect- ture, two hours; outside study, four hours. Designed for graduate students. Introduction to research topics and issues in medical informatics for students new to the 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 approaches such as information system architectures, data and process modeling, in- formation extraction and representations, information retrieval and visualization, health services research, telemedicine, etc. Letter grading.

221. Human Anatomy and Physiology for Medical and Imaging Informatics. (4) (Formerly numbered Biomedical Engineering 221.) Lecture, four hours; outside study, eight hours. Designed for graduate stu- dents. Introduction to basic human anatomy and physiology, with particular emphasis on understand- ing and visualization of anatomy and physiology through medical images. Topics relevant to acquisi- tion, representation, and dissemination of anatomical knowledge in computerized clinical applications. Top- ics include chest, cardiac, neurology, gastrointestinal/ genitourinary, musculoskeletal, and integumentary sys- tems. Introduction to basic imaging physics (magnetic resonance, computed tomography, ultrasound, com- puted radiography) to provide context for imaging modalities previously presented. Overview of human anato- my. Geared toward nonphysicians who require more formal understanding of human anatomy/physiology. Letter grading.

223A-232B-232C. Programming Laboratories for Medical and Imaging Informatics I, II, III. (4-4-4) (Formerly numbered Biomedical Engineering 223A- 232B-232C). Lecture, two hours; laboratory, two hours; outside study, eight hours. Designed for gradu- ate students. Programming laboratories to support coursework in other medical and imaging informatics core curriculum courses. Exposure to programming concepts for medical applications, with focus on ba- sic abstraction techniques used in image processing and medical information system infrastructures. Letter grading. 222A. Requisites: Computer Science 31, 32, 114 or 211A. Requisite: course 223A is re- quisite to 223B, which is requisite to 223C. Integrated with topics presented in course M227 to reinforce concepts presented with practical experience. Proj- ects focus on understanding medical networking issues and implementation efforts with focus on interfacing healthcare environment, with emphasis on use of DI- COM. Introduction to basic tools and methods used within imaging system infrastructure. Letter grading. 222B. Requisites: coursework in course 223A. Inte- grated with topics presented in courses 222A, M227, and M228 to reinforce concepts presented with practical experience. Projects focus on medical image management and decision support systems. Letter grading.

224A. Requisites: coursework in course 223A. Introduction to medical information retrieval and data- mining concepts for medical applications, with focus on basic abstraction techniques used to extract mean- ingful features from medical text and imaging data and visualize results. Integrated with topics presented in courses 224B and 226 to reinforce concepts pre- sented with practical experience. Projects focus on medical information retrieval, knowledge representa- tion, and visualization.

224B. Advances in Imaging Informatics. (4) (Formerly numbered Biomedical Engineering 224B.) Lecture, four hours; outside study, eight hours. Requisites: course 224A. Overview of information retrieval tech- niques in medical imaging and informatics-based ap- plications of imaging, with focus on various advances in research, introduction to core concepts in information retrieval (IR), reviewing seminal papers on evaluating IR systems and their use in medicine (e.g., teaching, research, and medical record retrieval), and in context-based image retrieval (CBIR) as motivating applica- tion, with examination of core works in this area. Techniques to realize medical CBIR, including image feature extraction and processing, feature representa- tion, classification schemes, retrieval techniques, indexing, image querying methods, and visualiza- tion of images (e.g., perception, presentation). Dis- cussion of research-advanced methods now being pur- sued by researchers. Letter grading.

M225. Biosensorship and Bioprocess Engineer- ing. (4) (Formerly numbered Biomedical Engineering M225.) (Same as Chemical Engineering CM225.) Lecture, four hours; discussion, one hour; outside study, seven hours. Corequisite: Chemical Engineering 101C. Separation strategies, unit operations, and economic factors used to design processes for isolat- ing and purifying materials by biocatalysts or enzymes, food additives, or pharmaceuticals that are products of biological reactors. Letter grading.

M226. Medical Knowledge Representation. (4) (Formerly numbered Biomedical Engineering M226.) Lecture, four hours; discussion, one hour; outside study, eight hours. Designed for gradu- ate students. Issues related to medical knowledge representation and its application in healthcare pro- cesses. Topics include data structures used for rep- resenting knowledge (conceptual graphs, frame-based models), different data models for representing spa- tial-temporal information, rule-based implementa- tion, and representation of uncertain and imprecise knowledge (data mining, statistical classifiers, and hierarchal classification), and basic information re-
trivial. Review of work in constructing ontologies, with focus on problems in implementation and definition. Common medical ontologies, coding schemes, and standardized indices/terminologies (SNOMED, UMLS). Letter grading.

M227. Medical Information Infrastructures and Internet Technologies. (4) (Formerly numbered Biomedical Engineering M227.) (Same as Information and Computer Science M245.) Lecture, four hours; outside study, eight hours. Enrolled for graduate students. Enrollment limited to 15. Overview of medical decision making, introduction to concepts of evidence-based medicine and decision theory, and related to process for improving care and outcomes. Basic probability and statistics to understand research results and evaluations, and algorithms for decision-making processes (Bayesian theorem, decision trees.) Study design, hypothesis testing, and estimation. Focus on technical advances in medical decision support systems and expert systems, with review of classic and current research. Introduction to common statistical and decision-making software packages to familiarize students with current tools. Letter grading.

C231. Nanopore Sensing. (4) (Formerly numbered Biomedical Engineering CM231.) Lecture, four hours; discussion, one hour; outside study, seven hours. Requisites: courses 100, 120, Life Sciences 2, 3, 23L, Physics 1A, 1B, 1C, 1. 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 phospholipid bilayer, patch clamp and single channel measurements and instrumentation, noise issues, protein engineering, molecular sensing, DNA sequencing, membrane engineering, and future directions of the field. Corequisite: scheduled with course C213L. Letter grading.

C233A. Advancing Bioengineering Innovations I: Unmet Needs. (4) Lecture, three hours; discussion, three hours; outside study, six hours. Design for graduate and professional students in engineering, dentistry, design, law, management, and medicine. Focus on understanding how to identify unmet clinical needs, properly filtering through these needs using various and logical decision-making processes to identify unmet needs for which potential medtech solutions are explored. Students work in groups to expedite traditional research and development processes to invent and develop new medical devices that increase quality of clinical care and result in improved patient outcomes in hospital system. Introduction to intellectual property basics and various medtech business models. Letter grading.

C233B. Advancing Bioengineering Innovations II: Developing and Implementing Medtech Solutions. (4) Lecture, three hours; outside study, nine hours. Enrolled for graduate students, scheduled with course C233A. Enrolled for graduate and professional students in engineering, dentistry, design, law, management, and medicine. Development of medtech solutions for unmet clinical needs previously identified in course C233A. Steps necessary to commercialize viable medtech solutions. Exploration of concept selection, business plan development, intellectual property filing, financing strategies, and device prototyping. Letter grading.
M260. Neuroengineering. (4) (Formerly numbered Biomedical Engineering M260.) (Same as Electrical Engineering 172, Life Sciences 3, Psychology 49.) Lecture, four hours; laboratory, one hour; discussion, four hours. Requisites: Mathematics 2A, Physics 1B or 6B. Introduction to principles and technologies of bioelectricity and neural signal recording, processing, and stimulation, including field potentials, extracellular and intracellular recordings, neural and non-neural sensors, and signal processing (action potentials, local field potentials, EEG, ECoG, intracellular and extracellular recording, microelectrode arrays). Course may include discussions of neural and non-neural sensors, neural signal processing, and biocompatibility. Preparation of drawings and written reports is required. Concurrently scheduled with course C172. Letter grading.

CM276. Introduction to Biomaterials. (4) (Formerly numbered Biomedical Engineering CM280.) (Same as Materials Science CM280.) Lecture, three hours; discussion, two hours; outside study, seven hours. Requisites: CM214, CM214B, Electrical Engineering 104, Neuroscience M212A-M212B, and Neuroscience M212C-M212D. Introduction to the design, fabrication, and testing of biomaterials. Topics include the principles of biomaterials science, the properties of different biomaterials, and the interaction of biomaterials with biological systems. Concurrently scheduled with course CM178. Letter grading.

CM279. Biomaterials-Tissue Interactions. (4) (Formerly Biomedical Engineering C281.) Lecture, three hours; outside study, nine hours. Requisite: course CM278. In-depth exploration of host cell response to biomaterials: vascular response, interaction with cells, and mechanical forces. Concurrently scheduled with course C179. Letter grading.

C282. Biomedical Interfaces. (4) (Formerly numbered Biomedical Engineering C282.) Lecture, four hours; laboratory, eight hours. Requisite: course CM178 or CM278. Function, utility, and biocompatibility of biomaterials depend critically on their surface and interfacial properties. Examination of morphology and composition of biomaterials and nanoscale, mesoscale, and macroscale 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) (Formerly Biomedical Engineering C283.) Lecture, three hours; discussion, two hours; outside study, seven hours. Requisites: Chemistry 20A, 20B, 20L. New technologies 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 rational designs for design and development of novel drug delivery systems that can provide spatial and temporal control of drug release. Introduction to biomaterials with specialized structures for drug delivery. Exploration of both chemistry of materials and physical presentation of devices and compounds used in delivery and release. Concurrently scheduled with course C183. Letter grading.

M294. Functional Neuroimaging: Techniques and Applications. (3) (Formerly numbered Biomedical Engineering M294.) (Same as Electrical Engineering 141 or 142 or Mathematics 115A or 115B.) Lecture, four hours; laboratory, two hours; outside study, eight hours. Requisites: course CM286 or equivalent. Guiding principles for proper selection of three basic neuroimaging modalities. Examination of imaging paradigms, and how to interpret results. Laboratory visits and design and implementation of functional MRI experiments. Letter grading.

CM296. Computational Systems Biology: Modeling and Simulation of Biological Systems. (5) (Formerly numbered Biomedical Engineering CM296.) Lecture, four hours; laboratory, six hours; outside study, eight hours. Requisites: Computer Science CM286 or equivalent. Dynamic biosystems modeling and computer simulation required. Topics will include biomedical process- es and systems at multiple levels of organization. Control system, multiprocessor, preceptor-predator, bioinformatics, modeling of neurophysiologic and molecular signals. Emphasis on computer modeling and simulation. Letter grading.

M296D. Introduction to Computational Cardiology. (4) (Formerly numbered Biomedical Engineering M296D.) (Same as Computer Science M296D.) Lecture, four hours; outside study, eight hours. Petition forms to request enrollment in graduate bioengineering students. Supervised in experimental data in biology, medicine, and the study of population genetics. 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://grad.ucla.edu/gasaaa

Graduate Degrees

The Bioinformatics Program offers Master of Science (M.S.) and Doctor of Philosophy (Ph.D.) degrees in Bioinformatics.

Bioinformatics

Graduate Courses

M202. Bioinformatics Interdisciplinary Research Seminar. (4) (Same as Chemistry M202.) Seminar, two hours; discussion, two hours. Corequisite: two hours 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.

M224. Computational Genetics. (4) (Same as Computer Science CM224 and Human Genetics CM224.) Lecture, four hours; discussion, two hours. Outside study, six hours. Requisites: Computer Science 32 or Program in Computing 10C with grade of C- or better, and Biostatistics 100A or 110A or Mathematics 170A or Statistics 100A. Designed for engineering students as well as students from biological sciences and medical school. Introduction to computational analysis of genetic variation and computational interdisciplinary research in genetics. Topics include introductions to genetics, identification of genes involved in disease, inferring human population history, technologies for obtaining genetic information, and genetic sequencing. Focus on formulating interdisciplinary problems as computational problems and then solving those problems using computational techniques from statistics and computer science. Letter grading.

M252. Seminar: Advanced Methods in Computational Biology. (2) (Same as Chemistry M252 and Human Genetics M252.) Seminar, one hour; discussion, one hour. Designed for advanced graduate students. Examination of computational methodology in bioinformatics and computational biology through presentation of current research literature. How to select and apply methods from computational and mathematical disciplines to problems in bioinformatics and computational biology; development of novel methodologies. S/U or letter grading.

M260A. Introduction to Bioinformatics. (4) (Same as Chemistry CM260A, Computer Science CM221, and Human Genetics M260A.) Lecture, four hours; discussion, two hours. Recommended requisites: Biostatistics 100A or 110A or Mathematics 170A or Statistics 100A, and Computer Science 32 or Program in Computing 10C with grade of C- or better. Prior knowledge of biology not required. Designed for engineering students as well as students from biological sciences and medical school. Introduction to bioinformatics and methodologies, with emphasis on concepts and inventing new computational and statistical techniques to analyze biological data. Focus on sequence analysis and alignment algorithms. S/U or letter grading.
M260B. Algorithms in Bioinformatics and Systems Biology. (4) (Same as Chemistry CM260B and Computer Science CM222.) Lecture, four hours; discussion, two hours. Recommended requisites: Bioinformatics 100A or 110A or Mathematics 170A or Statistics 100A, and Computer Science 32 or Program in Computing 32C with grade of C- or better. Course CM260A is not requisite to CM260B. Designed for engineering students as well as students from biological sciences and medical school. Development and application of computational approaches to biological questions, with focus on formulating interdisciplinary problems as computational problems and then solving these problems using algorithmic techniques. Computational techniques include those from statistics and computer science. Letter grading.

M271. Statistical Methods in Computational Biology. (4) (Same as Biostatistics M271 and Statistics M254.) 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 computational biology problems. Letter grading.

296. Seminar: Research Topics in Bioinformatics. (2) Seminar, to be arranged; discussion, three hours. Advanced study and analysis of current research topics in bioinformatics. Discussion of current research and literature in research specialty of faculty member teaching course. May be repeated for credit. S/U grading.

375. Teaching Apprentice Practicum. (1 to 4) Seminar, to be arranged. Preparation: apprentice personnel employment as teaching assistant, associate, or fellow. Teaching apprenticeship under active guidance and supervision of regular faculty member responsible for curriculum and instruction at UCLA. May be repeated for credit. S/U grading.

596. Directed Individual Study or Research in Bioinformatics. (2 to 12) Tutorial, to be arranged. May be repeated for credit. S/U grading.

597. Preparation for M.S. Comprehensive Examination or Ph.D. Qualifying Examinations. (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.

**Scope and Objectives**

The biological chemistry graduate program prepares students for careers as independent research scientists and scholars. Laboratory research is the central element. Biological chemistry has grown to include studies of cellular, molecular, and developmental biology, molecular genetics and genetic engineering, and many aspects of the health sciences. The research activities of the department include these areas as well as the classic topics of metabolism, enzymology, and biomolecular structure. Courses and seminar programs are designed to provide students with the necessary background and approach to encourage their continuing growth in these rapidly changing areas of science.

Interaction with other graduate programs provides access to scientists in a variety of related disciplines. Through its primary affiliation with the Geffen School of Medicine, the department 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://grad.ucla.edu/gasaa/Biology/.

**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, three hours; discussion, one hour. Requisites: Chemistry 14A, 14B, and 14BL or 20A, 20B, and 20L, Life Sciences 3, 4, 23L. Not open for credit to students with credit for Molecular Cell and Developmental Biology 100, 165A, or 165B. Satisfies premedical requirements. Eukaryotic cellular structures and biogenesis at molecular level. Biochemical and genetic analysis of 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.

191. Variable Topics Research Seminars: Contemporary Biology. (2) Seminar, two hours. Designed for undergraduate fellows in Howard Hughes Undergraduate Research Program. Presentation of weekly seminars on research literature in fields of biochemistry and molecular biology. Reading, discussion, and development of culminating project. May be repeated for credit. P/NP grading.

194. Research Group Seminars: Biological Chemistry. (2) Seminar, two hours. Designed for graduate students who are part of research group. Discussion of research methods and current literature in field of or of research of faculty members or students. May be repeated for credit. P/NP grading.

198. Directed Research or Senior Project in Biological Chemistry. (2 to 8) Tutorial, two hours. Limited to juniors/seniors. Supervised individual research or investigation under guidance of faculty mentor. Paper required. May be repeated for maximum of 16 units. Individual contract required. P/NP or letter grading.

**Graduate Courses**

201A-201B. Biological Chemistry. [5-5] Lecture, five hours. Preparation: organic chemistry. Open to nonmedical students with consent of instructor. Primarily for first-year medical students and runs throughout School of Medicine’s second semester. General biochemistry with emphasis on major systems. Structure, function, and metabolism of major cellular components. To receive credit, both courses must be taken together in same academic year. In Progress (201A) and S/U (201B) grading.

204. Human Biological Chemistry and Nutrition Laboratory. (3) Laboratory, four hours. Open to nonmedical students with consent of instructor. Experiments illustrating techniques and procedures in medically related biochemistry and nutrition, analysis of experimental results. S/U or letter grading.

220A-220B-220C. Research Laboratory Rotations. (2 to 8 each) Seminar, six to eight hours. Students arrange apprenticeships in laboratories of one or more departmental faculty members and engage in research projects over the course of a year. Allows students to acquire in-depth laboratory experience in specific research areas and facilities. On completion of decision on their part in selection of thesis/research advis.-S/U grading.

M295. Seminar: Current Topics in Bioinformatics. (4) (Same as Computer Science M295 and Human Genetics M295S.) Seminar, four hours; outside study, eight hours. Designed for graduate engineering students, as well as students from biological sciences and medicine. Introduces students to current topics in bioinformatics, genomics, and computational genomics and preparation for computational interdiscipliary research in genetics and genomics. Topics include genome analysis, regulatory genomics, association analysis, association study design, isolated and aligned populations, population substructure, human structural variation, model organisms, and genomic technologies. Computational techniques include those from statistics and computer science. May be repeated for credit with topic change. Letter grading.

M324. Genetic Control of Development. (4) (Same as Molecular Cell, and Developmental Biology M324.) Lecture, four hours. Topics at forefront of molecular developmental biology, including problems in oogenesis and early embryogenesis, pattern formation, axis determination, nervous system development, cellular morphogenesis, and cell-cell and cell-matrix interactions. S/U or letter grading.

M327. Cellular and Molecular Basis of Disease. (4) (Same as Pathology M327.) Lecture, two hours; laboratory, two hours. Preparation: one course in molecular biology, cell biology, and biological chemistry. Discussion of key issues in disease mechanisms, with emphasis on experiments leading to understanding of these mechanisms. Identification of important questions still remaining unanswered. Letter grading.

251A-251B-251C. Seminars: Transcriptional Regulation. (2-2-2) Seminar, two hours. Advanced courses in developmental genetics and biochemistry, with emphasis on early development. Emphasis mostly for students actively working or highly interested in early development, S/U grading.

296. Research Seminar Series in Biological Chemistry. (1) Seminar, one hour. Limited to biological chemistry students. Research presentations from second- through fourth-year graduate students related to their research. Designed to be highly interactive, with time for questions from fellow graduate students, postdoctoral students, and faculty members during and after presentations. May be repeated for credit. S/U grading.

375. Teaching Apprentice Practicum. (1 to 4) Seminar, to be arranged. Preparation: apprentice personnel employment as teaching assistant, associate, or fellow. Teaching apprentice under active guidance and supervision of regular faculty member responsible for curriculum and instruction at UCLA. May be repeated for credit. S/U grading.

596. Directed Individual Study and Research. (2 to 12) Tutorial, to be arranged. S/U or letter grading.

597. Preparation for Examinations. (2 to 4) Tutorial, to be arranged. Individual study for Ph.D. qualifying examinations or M.S. comprehensive examination. S/U grading.


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### BIOLOGY

See Ecology and Evolutionary Biology.

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### BIOMATHMATICS

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Elliott M. Landaw, M.D., Ph.D., Chair
Robert M. Elashoff, Ph.D., Vice Chair
Janet S. Sinshime, Ph.D., Vice Chair

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### Professors

- Thomas Chou, Ph.D.
- Robert M. Elashoff, Ph.D.
- Henry S.C. Huang, D.Sc.
- Elliott M. Landaw, M.D., Ph.D.
- Kenneth L. Lange, Ph.D. (Maxine and Eugene Rosenfield Endowed Professor of Computational Genetics)
- Michael E. Phelps, Ph.D. (Norton Simon Professor of Biophysics)

Steven Plantadosi, Ph.D., in Residence
Janet S. Sinshime, Ph.D.
Carol M. Newton, M.D., Ph.D.

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### Associate Professor

Van M. Savage, Ph.D.

Lecturer

Jeffrey Gornbein, Ph.D.

Adjunct Associate Professor

Eli Engel, M.D., Ph.D.

Adjunct Assistant Professor

Ning Li, Ph.D.

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### Scope and Objectives

As biology advances rapidly in quantitative research methods, both the need for and possibility of closely associated theoretical research increases. On numerous medical and medical science frontiers—such as genetics, molecular biology, oncology, pharmacology, neurosciences, and physiology—biomathematics is contributing both in its basic research and the development of specialized computer software to support investigation and healthcare. UCLA has one of the few departments in this rapidly evolving field.

The department's orientation is away from abstract modeling and toward theoretical research vital to the advancement of current biomedical research frontiers. The doctoral program reflects this in requirements for advanced training in biomedical research specialty and for the mathematical and computing skills required to contend realistically with complex phenomena encountered in biology and medicine. The art of biomathematical research is developed individually from the first year on. The master's program adapts to the needs of researchers desiring supplemental biomathematical training.

The Department of Biomathematics welcomes both undergraduate and graduate students in other majors to its courses in modeling, biomedical computing, and statistics. Premedical majors with mathematical/computer interests can receive early guidance toward an M.D./Ph.D. program in Biomathematics. The department also provides statistical and biomathematical training in the medical curriculum and postgraduate medical programs.

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### Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA.
Graduate Degrees, available at the Graduate Division website, http://grad.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 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. Preparation: some computer programming. Requires: 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. How to develop one’s own computer models using IMSL mathematics subroutines. P/NP or letter grading.

108. Introduction to Modeling in Neurobiology. (4) Lecture, four hours; computer laboratory, two hours. Preparation: some computer programming. Requires: Mathematics 32A. Designed for upper division science majors and biomedical graduate students. Survey of a wide variety of topics in neurobiological modeling, current neuronal modeling systems. Development of skills to formulate and program one’s own studies using IMSL mathematics subroutines. P/NP or letter grading.

110. Elements of Biomathematics. (4) Lecture, three hours; laboratory, three hours. Preparation: computer literacy. Requires: Mathematics 32A. Elements of 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.

160. Introductory Biomathematics for Medical and Biological 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.

190HA-190HB. Honors Research in Biomathematics. (4-4) Tutorial, to be arranged. Limited to juniors/seniors. Individuals spend three hours in lab. Requires: Mathematics 32A. Biostatistics 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, two hours. Limited to juniors/seniors. Supervised individual research or investigation under guidance of faculty mentor. Culminating paper required. May be repeated for credit. Individual contract required. P/NP or letter grading.

Graduate Courses

200. Research Frontiers in Biomathematics. (2) Lecture, two hours. Series of presentations by faculty members on research frontiers in biomathematics. S/U or letter grading.

201. Deterministic Models in Biology. (4) Lecture, three hours; laboratory, three hours. Preparation: knowledge of linear algebra and differential equations. Examination of conditions under which deterministic approaches can be employed and conditions where they may be expected to fail. Topics include compartmental analysis, enzyme kinetics, physiological control systems, and cellular/animal population models. S/U or letter grading.


203. Stochastic Models in Biology. (4) Same as Human Genetics M203.) Lecture, four hours. Requires: Mathematics 170A or equivalent experience in probability. Mathematical description of biological relationships, with particular attention to areas where deterministic models do not make sense. 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.


207A. Theoretical Genetic Modeling. (4) Same as Biostatistics M207 and Human Genetics M207A.) Lecture, three hours; discussion, one hour. Requires: Mathematics 115A, 131A, Statistics 100B. Mathematical models in statistical genetics. Topics include population genetics, genetic epidemiology, gene mapping, and computer experiments. Data analysis, sequence analysis, and molecular phylogeny. S/U or letter grading.

207B. Applied Genetic Modeling. (4) Same as Biostatistics M237 and Human Genetics M237B.) Lecture, two hours; computer laboratory. Requires: 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 data lab. Ratory 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 electrobiological bases 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 neuronal modeling, 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. S/U or letter grading.

210. Optimization Methods in Biology. (4) Lecture, four hours. Preparation: undergraduate mathematical analysis and linear algebra; familiarity with programming language such as Fortran or C. Modern computational biology relies heavily on optimization. Survey of theory and numerical methods for discrete and continuous optimization, with applications from genetics, medical imaging, pharmacokinetics, and statistics. S/U or letter grading.

211. Mathematical and Statistical Phylogenetics. (4) (Same as Biostatistics M239 and Human Genetics M211.) Lecture, three hours; laboratory, one hour. Preparation: 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.

212. Nonlinear Dynamics in Biological Systems. (4) Lecture, three hours; discussion, one hour. Preparation: ordinary partial differential equations, one computer course. Introduction to the study of nonlinear differential equations, partial differential equations, and computer programming. Mathematical bases of nonlinear dynamics and self-organization in temporal and spatial systems, with applications to biological systems. Topics range from bifurcation theory in low dimension to pattern formation in high dimension. Use of biologically important examples to illustrate applications of these dynamics, including gene regulation and protein-protein interaction networks, glycolytic and metabolic oscillations, circadian rhythms, cell cycle controls, intracellular calcium cycling, pattern formation in morphogenesis, and action potential models and electrical wave formation and propagation in nerve and cardiac systems. S/U or letter grading.


220. Kinetic and Steady State Models in Pharmacology and Physiology. (4) Lecture, four hours. Recommended preparation: knowledge of linear algebra, differential equations, statistics. Designed for bio-
gists and theoreticians. Modeling and data analysis in pharmacokinetics, enzyme kinetics, and endocrinology. Topics include: compartmental and noncompartmental approaches, steady state analysis of transport and binding processes, and optimal experiment design. S/U or letter grading.

M230. Computed Tomography: Theory and Applications. (Same as Biomedical Physics M230.) Lecture, four hours. Computed tomography is three-dimensional imaging technique being widely used in radiology and is becoming active research area in biomedical engineering. Basic concepts, computed tomography (CT), various reconstruction algorithms, special characteristic of CT, physics in CT, and various biomedical applications. S/U or letter grading.

M231. Statistical Methods for Categorical Data. (Same as Biostatistics M210.) Lecture, three hours; discussion, one hour. Requisites: Biostatistics 100B or 110B, Statistics 100B. Statistical techniques for analysis of categorical data; discussion and illustration of applications and limitations. S/U or letter grading.

M232. Statistical Analysis of Incomplete Data. (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, maximum likelihood in ANOVA and 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. (Same as Biostatistics M234.) Lecture, three hours; discussion, one hour; laboratory, one hour. Requisites: Biostatistics 200A, and 202B (or Statistics 100C). Bayesian approach to statistical inference, with emphasis on biomedical applications and concepts rather than mathematical theory. Topics include large sample Bayes inference from likelihoods, noninformative and conjugate priors, empirical Bayes, Bayesian approaches to linear and nonlinear regression, model selection, Bayesian hypothesis testing, and numerical methods. S/U or letter grading.


258. Introduction to Clinical Trials. (2) Lecture, two hours. Requisites: courses 170A, 266A. 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 professional health sciences or M.D. degree. Required of all M.S. in Clinical Research students. Discussion and analysis of eight published and well-known trials with students, one invited clinical faculty member, and course director. Development of critical ability to evaluate trial design and pitfalls. S/U or letter grading.

M260A-M260B. Methodology in Clinical Research I, II. (4-4) (Same as Medicine M260A-M260B.) Lecture, four hours. Recommended preparation: M.D., Ph.D., or dental degree. Requisites: courses 170A, 265A. Course M260A is requisite to M260B. Presentation of principles and practices of major disciplines underlying clinical research methodology, such as biostatistics, epidemiology, pharmacokinetics. S/U or letter grading.

M260C. Methodology in Clinical Research III. (4) (Same as Medicine 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 Medicine M261.) Lecture, two hours. Discussion, one hour. Preparation: as 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.

M282. Communication of Science. (2) (Same as Psychiatry M230.) Lecture, two hours; discussion, one hour. Presentation of various types of scientific writings and their good practice. Details of writing specific articles: methods, results, discussion. Writing of review article. Grant submissions: aims, background, results, design. Role of appendices. Communication with lay public. S/U or letter grading.

M263. Clinical Pharmacology. (2) (Same as Medicine M263 and Psychiatry M263.) 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 general medical and to advances in contemporary medicine such as targeting, gene therapy, and genomics. Letter grading.

M265A. Data Analysis Strategies I. (4) Lecture, two hours; laboratory, two hours. Preparation: M.D. or Ph.D. degree. Requisite: course 170A. Designed to provide students with hands-on experience developing and testing hypotheses using various types of data: tabular, graphic, graphical. Emphasis on developing testable hypothesis, data management, and analysis strategies and written presentation of findings. Experience with full process of hypothesis generation, operationalization of variables, selection of analysis techniques, and presentation of findings so students are better prepared to complete data analysis, interpretation of results, and written statistical report (4-6 for master’s thesis and subsequent articles). Students encouraged to provide their own data. Databases provided for use in completing exercises for those without available data. Letter grading.

M265B. Data Analysis Strategies II. (2) Lecture, one hour; laboratory, one hour. Requisite: course 265A. Continuation of course 265A; use of SAS computer language. Letter grading.

266A. Applied Regression Analysis in Medical Science. (4) (Same as Biostatistics 266A.) Lecture, one hour; discussion, one hour. Requisite: course M281, Biostatistics 100B. Analysis of regression models. Multiple regression, regression model selection, analysis of variance, logistic regression, and survival analysis. Letter grading.

266B. Advanced Biostatistics, (4) (Formerly numbered 266.) Lecture, three hours; discussion, one hour. Requisite: course 266A. Continuation of course 266A. Some traditional multivariate methods, such as principle components, factor analysis, cluster analysis, and more contemporary methods, including recursive partitioning and missing data. Multilevel and longitudinal analysis. Letter grading.

M270. Optimal Parameter Estimation and Experimental Design for Biomedical Systems. (4) (Same as Bioengineering M296B, Computer Science M296B, and Medicine M297D.) Lecture, four hours; outside study, eight hours. Requisite: course 220 or Bioengineering CM296 or M296A. Estimation methodology 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 medical devices, with special focus on optimal sampling schedule design for kinetic models. Exploration of PC software for model building and optimal experiment design via applications in physiology and pharmacology. Letter grading.

M271. Statistical Methods in Computational Biology. (4) (Same as Bioinformatics M271 and Statistics M271.) Lecture, three hours; discussion, one hour. Preparation: elementary probability concepts. Requisite: Bioinformatics 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.

273. Stochastic Modeling in Molecular Cellular Biophysics. (4) Lecture, three hours; discussion, one hour. Requisite: Mathematics 170A or equivalent experience in probability, lower division physics, or physical chemistry. Most molecular systems are large collections of molecules; behavior of such systems is stochastic. Mathematical descriptions of biochemical reactions with and without energy dissipation, molecular structures, and physical techniques that measure various biological processes. S/U or letter grading.


M282. Longitudinal Data. (4) (Same as Biostatistics M236.) Lecture, three hours; discussion, one hour; laboratory, one hour. Requisites: Biostatistics 200A, one other 200-level biostatistics or statistics course. Longitudinal data analysis, graphing longitudinal data, specifying predictors, modeling variances and covariance, inference, computing, hierarchical models, and random effects. S/U or letter grading.

M284. Methodology of Clinical Trials. (4) (Same as Biostatistics M238.) Lecture, three hours; discussion, two hours. Requisites: course M281, Biostatistics 200A. Methodological principles of clinical trials, actual practice and principles of trials. Considerable focus on the course two trials and multichile phase three trials. Emphasis on major inferential issues. S/U or letter grading.

296A-296B. Advanced Topics in Clinical Pharmacology. (2-2) Lecture, one hour; discussion, one hour. Requisite for pharmacists. Presentation of principles and transport, assessment of drug effects, drug therapy in special populations, and contemporary drug development. S/U or letter grading.

299A-299B. Special Topics in Clinical Research. (2 to 4) Seminar, three hours. Requisites: courses M260A, M260B. Advanced study and analysis of current topics in clinical research. Discussion of current research and literature in research specialty of faculty member teaching course. Content varies from term to term and may include lectures from visiting scientists. May be repeated for credit with consent of instructor. S/U or letter grading.

596. Directed Individual Study or Research in Biostatistics. (2 to 12) Tutorial, to be arranged. Individual study on topics not yet covered by offerings of department. May be repeated for credit with topic change. S/U or letter grading.

597. Preparation for M.S. or Ph.D. Comprehensive Examination or Ph.D. Qualifying Examinations. (2 to 8) Tutorial, to be arranged. Individual study, S/U grade.

Biomedical Physics

Interdepartmental Program
David Geffen School of Medicine

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Faculty Committee
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Michael Enzmann-Gray, Ph.D. in Residence (Radiological Sciences)
Michael E. Phelps, Ph.D. (Biometaphysics, 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 graduate program supported by the Departments of Molecular and Medical Pharmacology, Radiation Oncology, and Radiological Sciences. It offers training in four specialties: molecular imaging, medical imaging, therapeutic medical physics, and radiation biology/experimental radiation therapy. Specialized facilities for training and research are available in the departmental clinical laboratories, the UCLA-DOE Institute for Genomics and Proteomics, 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 irradiator, 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 independent 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, teaching, clinical service, and consultation. Biomedical physicists are usually employed in hospitals frequently associated with a medical school, where they are members of the academic staff. They are also in demand in high-technology private industry engaging in research and development of diagnostic equipment. In government agencies, biomedical physicists are involved in the formulation and enforcement of regulations applied to the use of radiation in healthcare delivery.

Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees. Available at the Graduate Division website, http://grad.ucla.edu/gasasa/libryu/pgmqrnrto.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 Biomedical Physics Program offers Master of Science (M.S.) and Doctor of Philosophy (Ph.D.) degrees in Biomedical Physics.

Biomedical Physics

Upper Division Course

190. 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 required. 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 radiations and their interaction with matter, nuclear decay processes, nuclear reactions, and compartment models. Physical and chemical properties of radioactive preparations used in nuclear medicine. Basic principles of nuclear medicine imaging. SPECT, and PET. S/U or letter grading.

200B. Nuclear Medicine Instrumentation. (4) Lecture, one hour; laboratory, three hours. Requisites: course 200A. Introduction to nuclear medicine instrumentation, including well ionization chambers, probe and well scintillation detectors, scintillation cameras, and single photon and positron emission computed tomography. S/U or letter grading.

201. Medical Radiation Accelerator Design. (4) Lecture, three hours. Requisite: course 216. Overview of physical principles involved in design of current particle accelerators (electron, proton, heavy particle) and analysis of characteristics of current accelerators and facility design. S/U or letter grading.

202A-202B. 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 recent 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 203. Hands-on experience calibrating treatment planning and radiation therapy equipment. 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. Study of image segmentation, feature extraction, object recognition, classification, and visualization with biomedical applications. Topics include region-growing, edge detection, mathematical morphology, clustering, neural networks, and volume rendering in lectures, case studies, and programming projects. S/U or letter grading.

211. Medical Ultrasound. (4) 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 characteriztication 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. Introduction to clinical and 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 functions. Topics include 2-deoxyglucose method for metabolic rate; iodoantipyrine method for blood flow; amino acid method for protein synthesis; quantitative receptor autoradiography; neuroanatomy and neurophysiology of autoradiogram and PET scan interpretation. S/U or letter grading.


218. Radiologic Functional Anatomy. (2) Lecture, two hours. Introduction to human anatomy, cell biology, and physiology as visualized through microscopy, molecular imaging, radiotherapy, CT, MRI, ultrasonography, PET, and SPECT. Letter grading.

M219. Principles and Applications of Magnetic Resonance Imaging. (4) Formerly numbered 219. (Same as Bioengineering M219.) Lecture, three hours; discussion, one hour. Basic principles of magnetic resonance (MR), physics, and image formation. Emphasis on hardware, Bloch equations, analytic expressions, image contrast mechanisms, spin and gradient echo imaging methods, structure of pulse sequences, and various scanning parameters. Introduction to advanced techniques in rapid imaging, quantitative imaging, and spectroscopy. Letter grading.

220A-220D. Laboratory Rotations in Biomedical Physics. (2-2) Laboratory, two hours. Laboratory projects to provide students with introduction to field. One oral and one written presentation required. S/U grading.

220C. Therapeutic Medical Physics; 220D. Radiation Biology and Experimental Radiation Therapy.

221. Applied Health Physics. (4) Lecture, four hours; discussion, one hour. Requires: course 218. Physics of radiation safety as applied to medical applications. Introduction to all regulatory issues pertaining to medical use of radioactivity. Letter grading.


223. Seminar: Radiation Biology. (4) Seminar, four hours. Exploration of physiologic and molecular mechanisms that impact on response of normal and malignant tissues to ionizing radiation, with particular emphasis on critical and high in-depth analysis of approaches through which such responses can be modified in therapeutic setting. Understanding of rationale for information into process of treatment planning and delivery. S/U grading.

225. Contrast Mechanisms and Quantification in Magnetic Resonance Imaging. (4) Lecture, four hours. Requires: course M219. Introduction to magnetic resonance mechanisms and quantification techniques in magnetic resonance imaging. Topics include exogenous and endogenous contrast mechanisms, measuring tissue perfusion and permeability, advanced diffusion and q-space analysis, chemical exchange and magnetization transfer imaging, and current and future technologies, as well as techniques that exploit interaction between diagnosis and therapy. 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 diseases with focus on interdisciplinary nature of the field. Exploration of two diseases in depth with detailed description of roles of physics-based diagnostic imaging and therapeutic options for each disease. Discussion of future and current technologies, as well as techniques that exploit interaction between diagnosis and therapy. Letter grading.

M230. Computed Tomography: Theory and Applications. (4) (Same as Biomanetrics M230.) Lecture, four hours; laboratory, two hours. Explained in three-dimension imaging technique being widely used in radiology and is becoming active research area in bio medicine. Basic principles of computed tomography (CT), various reconstruction algorithms, special characteristics of CT, physics in CT, and various biomedicai applications. S/U or letter grading.

M248. Introduction to Biological Imaging. (4) (Same as Bioengineering M248 and Pharmacology M248.) Lecture, three hours; laboratory, one hour; outside study, seven hours. Exploration of role of biological imaging in modern biology and medicine, including imaging physics, instrumentation, image processing, and applications of imaging for range of conditions. Practical experience provided through series of imaging laboratories. Letter grading.

260A-260B. Seminars: Biomedical Physics. (1-1-1) Seminar, one hour. Joint critical study by students and instructors in fields of knowledge pertaining to biomedical physics. Periodic contributions by visiting scientists. Discussion of research in progress. Student presentations required in spring term. May be repeated. S/U (260A, 260B) and letter (260C) grading.

M266. Advanced Magnetic Resonance Imaging. (4) (Same as Neuroscience M267 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.


269. Seminar: Medical Imaging. (1) Seminar, one hour. Joint critical study by students in medical imaging specialty. Topics of current interest in medical imaging, with lecturers from department, other universities, and private industry. S/U or letter grading.

M285. Functional Neuroimaging: Techniques and Applications. (3) (Same as Bioengineering M284, Neuroscience M285, Psychiatry M285, and Psychology M278.) Lecture, three hours. In-depth examination of activation imaging, including MRI and electrophysiological methods, data acquisition and analysis, experimental design, and results obtained thus far in human systems. Strong focus on understanding technologies, how to design activation imaging paradigms, and how to interpret results. Laboratory visits and design and implementation of functional MRI experiment. S/U or letter grading.


495. Special Studies in Biomedical Physics. (4) Seminar, two hours; laboratory, four hours. Teaching assistance in graduate laboratory courses under supervision of faculty member. S/U grading.

596. Research in Biomedical Physics. (4 to 12) Tutorial, to be arranged. Directed individual study or research. Only one 596 course may be applied toward M.S. degree requirements. May be repeated for credit. S/U or letter grading.

597. Preparation for Ph.D. Qualifying Examinations. (4) Tutorial, to be arranged. May not be applied toward M.S. degree requirements. May not be repeated. S/U grading.

598. Research for and Preparation of M.S. Thesis. (4 to 12) Tutorial, to be arranged. Two 598 courses (or 598 and 596 combined) may be applied toward M.S. degree requirements. May be repeated. S/U grading.


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Ellen M. Carpenter, Ph.D., (In Residence (Psychiatry and Biobehavioral Sciences)
John J. Colicelli, Ph.D. (Biological Chemistry)
Albert J. Courey, Ph.D. (Chemistry and Biochemistry)
Soro De Chaniadarev, Ph.D. (History, Institute for Society and Genetics)
Frank A. Laski, Ph.D. (Molecular, Cell, and Developmental Biology)
Aldons J. Lusis, Ph.D. (Human Genetics, Medicine, Microbiology, Immunology, and Molecular Genetics)
Kelsey C. Martin, M.D., Ph.D. (Biological Chemistry, Psychiatry and Biobehavioral Sciences)
Jeffery F. Miller, Ph.D. (Microbiology, Immunology, and Molecular Genetics)
Dwayne D. Simmons, Ph.D. (Integrative Biology and Physiology)
Stephen T. Smale, Ph.D. (Microbiology, Immunology, and Molecular Genetics)
Hong Wu, M.D., Ph.D. (Molecular and Medical Pharmacology)

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 (see http://www.biomedresearchminor.ucla.edu) 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): Biomedical Research 5HA, Honors College 70A, Life Sciences 10H, or an approved alternative course and Molecular, Cell, and Developmental Biology 60.

Scope and Objectives

In recent years biostatistics has become one of the most stimulating areas of applied statistics. The field encompasses the methodology and theory of statistics as applied to problems in the life and health sciences. Biostatisticians are trained in the skilled application of statistical methods to the solution of problems encountered in public health and medicine. They collaborate with scientists in nearly every area related to health and have made major contributions to our understanding of AIDS, cancer, genetics, bioinformatics, and immunology, as well as other areas. Further, biostatisticians spend a considerable amount of time developing and evaluating the statistical methodology used in those projects. The Department of Biostatistics offers M.S. and Ph.D. degrees in Biostatistics and, through the School of Public Health, the M.P.H. and Dr.PH. degrees with a specialization in biostatistics (see Public Health Schoolwide Programs). All students receive a balanced education, blending theory and practice.

A degree in biostatistics prepares students for work in a wide variety of challenging positions in government, industry, and education. Graduates have found careers involving teaching, research, and consulting in such fields as medicine, public health, life sciences, and survey research. There has always been a strong demand for well-trained biostatisticians; graduates have had little difficulty finding employment well suited to their particular interests.

Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website, http://grad.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.

Biostatistics / 201

Potter C. Chang, Ph.D.
Virginia A. Clark, Ph.D.
Frederick J. Dorey, Ph.D.
Donald Guthrie, Ph.D., in Residence
Robert I. Jennrich, Ph.D.

Associate Professors
Catherine M. Crespi, Ph.D., in Residence
Christina Ramirez Kitchen, Ph.D.
Damilta Senturk, Ph.D., in Residence
Catherine A. Sugar, Ph.D., in Residence

Assistant Professors
Rajesh R. Nandy, Ph.D.
Donatello Telesca, Ph.D.

Lecturers
Jeffrey A. Gornbein, Dr. P.H.
Fei Yu, Ph.D.

Adjunct Professors
David W. Gjertson, Ph.D.
Martin L. Lee, Ph.D.
James W. Sayre, Dr.P.H.

Adjunct Assistant Professors
Karabi Nandy, Ph.D.
Angela P. Presson, Ph.D.

Jonathan and Karin Fielding School of Public Health

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William G. Cumberland, Ph.D., Chair

Professors
Thomas R. Belin, Ph.D.
Ronald S. Brookmeyer, Ph.D.
William G. Cumberland, Ph.D.
Dorota M. Dabrowska, Ph.D.
Robert M. Elashoff, Ph.D.
Stefan Horvath, Ph.D., Sc.D.
Gang Li, Ph.D.
Honghu Liu, Ph.D.
Janet S. Sinharoy, Ph.D.
Marc A. Suchard, Ph.D.
Robert E. Weiss, Ph.D.
Weng Kee Wong, Ph.D.

Professors Emeriti
Abdelmonem A. Afifi, Ph.D.
Nancy G. Berman, Ph.D.

BIOSTATISTICS
Graduate Degrees
The Department of Biostatistics offers Master of Science (M.S.) and Doctor of Philosophy (Ph.D.) degrees in Biostatistics.

Biostatistics
Upper Division Courses

200A. Introduction to Biostatistics. (4) Lecture, three hours; discussion, one hour; laboratory, one hour. Preparation: one biological or physical sciences course. Suitable for juniors/seniors. Students who have completed courses in statistics may enroll only with consent of instructor. Not open for credit to students with credit for course 110A. Introduction to methods and concepts of statistical analysis. Sampling situations, with special attention to those occurring in biological sciences. Topics include distributions, tests of hypotheses, estimation, types of error, significance and confidence levels, sample size. P/NP or letter grading.

200B. Introduction to Biostatistics. (4) Lecture, three hours; discussion, one hour; laboratory, one hour. Requisite: course 200A. Not open for credit to students with credit for course 110B. Introduction to analysis of variance and experimental design, and correlation analysis. P/NP or letter grading.

110A. Basic Biostatistics. (4) Lecture, three hours; discussion, one hour; laboratory, one hour. Requisite: Mathematics 31B. Not open for credit to students with credit for course 100A. Basic concepts of statistical analysis applied to biological sciences. Topics include random variables, sampling distributions, parameter estimates, statistical inference. P/NP or letter grading.

110B. Basic Biostatistics. (4) Lecture, three hours; discussion, one hour; laboratory, one hour. Requisite: course 110A. Not open for credit to students with credit for course 100B. Topics include elementary analysis of variance, simple linear regression; topics related to analysis of variance and experimental designs. P/NP or letter grading.

197. Individual Studies in Biostatistics. (2 to 4) Tutorial, four hours. Limited to juniors/seniors. Individual intensive study, with scheduled meetings to be arranged between faculty member and student. Asigned 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. Biostatistics. (4) Lecture, three hours; discussion, one hour; laboratory, one hour. Requisite: courses 100A and 100B, or 110A and 110B. Topics in methodology of applied statistics, such as design, analysis of variance, regression. S/U or letter grading.

200B-200C. Biostatistics. (4-4) Lecture, three hours; discussion, one hour; laboratory, one hour. Requisite: course 200A. Multiple linear regression, including model validation, influence of observations, regression diagnostics; discriminant analysis; principal components; factor analysis and clinical trials. 200C. Requisites: courses 200A, 200B. Measures of association and analysis of categorical data, theory of generalized linear models.


215. Survival Analysis. (4) (Same as Biomathematics M281.) Lecture, three hours; discussion, one hour. Requisite: course 202B. Topics in biostatistics not covered in other courses. Letter grading.


220. 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, and to enhance classical numerical analyses, especially assumption validity checking. Principles of graph construction, graphical methods, and perception issues. S/U or letter grading.

232. Statistical Analysis of Incomplete Data. (4) (Same as Biomathematics 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 imputation, weighted least squares methods, and nonrandom nonresponse models. Emphasis on application of methods to applied problems, as well as on underlying theory. S/U or letter grading.


234. Applied Bayesian Inference. (4) (Same as Biomathematics M234.) Lecture, three hours; discussion, one hour; laboratory. Requisites: courses 200A, and 202B (or Statistics 100C). Bayesian approach to statistical inference, with emphasis on biomedical applications and concepts rather than mathematical theory. Topics include Bayes inference from likelihoods, noninformative and conjugate priors, empirical Bays, Bayesian approaches to linear and nonlinear regression, model selection, Bayesian hypothesis testing, and numerical methods. S/U or letter grading.


236. Longitudinal Data. (4) (Same as Biomathematics M236.) Lecture, three hours; discussion, one hour. Requisite: course 200A. Other 200-level biostatistics or statistics course. Longitudinal data analysis, graphing longitudinal data, specifying predictors, modeling variances and covariance, inference, computing, hierarchical models, and random effects. S/U or letter grading.

237. Applied Genetic Modeling. (4) (Same as Biomathematics M207B and Human Genetics M207B.) Lecture, three hours; 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 categorical traits. Topics include methods for hands-on computer analysis of genetic data; laboratory report required. Course complements M272; students may take either and are encouraged to take both. S/U or letter grading.


M239. Mathematical and Statistical Phylogenetics. (4) (Same as Biomathematics M211 and Human Genetics M211.) Lecture, three hours; laboratory, one hour. Requisites: courses 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. Students must have access to a computer to perform 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) Seminar. Introduction to resources for finding statistical literature. Discussion of principles of making statistical presentations and how to write statistical reports, including writing abstracts and choice of key words. Discussion of journal article preparation and submission. Emphasis on hands-on computer processes 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 upper division three-semester theoretical statistics course. Topics include linear algebra applied to linear statistical models, distribution of quadratic forms, maximum likelihood estimation, and statistical theory. Emphasis on major inferential issues. S/U or letter grading.

251. Multivariate Biostatistics. (4) Lecture, three hours; discussion, one hour. Requisite: course 250A. Multivariate models in biological and medical situations. Topics from multivariate distributions, component analysis, factor analysis, discriminant analysis, MANOVA, MANCOVA, longitudinal models with random coefficients. S/U or letter grading.


256. Advanced Methods of Mathematical Statistics. (4) Lecture, three hours; discussion, one hour. Requisites: courses 202A, 202B, 255. Survey of advanced topics in mathematical statistics, with special emphasis on applications to biostatistics. Topics include limit theorems and asymptotic criteria in decision theory, basic concepts from empirical processes theory, minimum distance estimation in parametric and nonparametric models, minimax and Bayes procedures, testing hypotheses and confidence procedures, resampling methods. S/U or letter grading.


M272. Theoretical Genetic Modeling. (4) (Same as Biomathematics M207A and Human Genetics M207A.) Lecture, three hours; discussion, one hour. Requisites: Mathematics 115A, 131A, Statistics 100B. Mathematical models in statistical genetics. Topics include population genetics, linkage, evolutionary theory, three hours; discussion, one hour. Requisite: course 255. Statistics 200A, 200B. Recommended: course M215. Topics include genetic mapping, design of genetic experiments, DNA sequence analysis, and molecular phylogeny. S/U or letter grading.

273. Classification and Regression Trees (CART) and Other Approaches. (4) Lecture, three hours; discussion, one hour. Requisite: course 200C. In instruction of statistical tools in analysis of large datasets. Classification and regression trees as well as other adaptive algorithms. Implementation of CART software and other programs to real datasets. S/U or letter grading.


276. Inferential Techniques That Use Simulation. (4) Lecture, three hours; discussion, one hour. Requisites: Statistics 200A, 200B. Recommended: Biostatistics 212. Theory and application of recently developed simulation methods that use computer simulation. Topics include bootstrap, multiple imputation, data augmentation, stochastic relaxation, and sampling/importance resampling algorithm. S/U or letter grading.


M278. Statistical Analysis of DNA Microarray Data. (4) (Same as Human Genetics M278.) Lecture, three hours. Requisite: course 200C. Use of statistical tools used to analyze microarray data. Structure corresponds to analytical protocol investigators might follow when working with microarray data. S/U or letter grading.


285. Advanced Topics: Recent Developments. (4) Lecture, three hours; discussion, one hour. Advanced topics and developments in biostatistics not covered in Biostatistics M210 through 219 or 270 through 276 or in other courses. Possible topics include time-series analysis, classification procedures, correspondence analysis, etc. S/U or letter grading.

288. Seminar: Statistics in AIDS. (2) Seminar; two hours. Requisites: course 200C. Designed for doctoral students interested in research contributions in analysis of AIDS data. Participants or outside speakers present their own research or discuss articles from literature. S/U or letter grading.

296. Seminar: Research Topics in Biostatistics. (1 to 4) Seminar; two hours. Advanced study and analysis of current topics in biostatistics. Discussion of current research and literature in research specialty of faculty members. S/U or 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 placement request and program training documentation on form available from Student Affairs Office. May not be applied toward M.S. minimum course requirement; 4 units may be applied toward 44-unit minimum total requirement.


402B. Biostatistical Consulting. (4) Discussion, two hours; laboratory, two hours. Requisite: course 402A. Principles and practices of biostatistical consulting. May be repeated for credit. S/U grading.

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 databases on various media as well as across networks; computer programming tools and techniques facilitating data entry; transmission, data retrieval for statistical analyses, tabulation and report generation useful to biostatisticians, health planners, and other health professionals. Letter grading.

M403B. Computer and Management of Health Data Using SAS. (4) (Same as Epidemiology M403B and Human Genetics M403B.) Lecture, two hours. Requisites: courses 100A, 100B (100B may be taken concurrently). Introduction to practical issues in management and analysis of health data using SAS programming language. Overview of popular applications and longitudinal population-based data sets to be used throughout to illustrate principles of data management and analysis for addressing biomedical and health-related hypothesis tests.

406. Applied Multivariate Biostatistics. (4) Lecture, three hours; laboratory, one hour. Preparation: at least two upper division research courses. Requisite: course 100B. Use of multiple regression, principal components, factor analysis, logistic regression, and canonical correlation in biomedical data analysis. S/U (optional only for nondiscrimination majors) or letter grading.

409. Doctoral Statistical Consulting Seminar. (2) Seminar; one hour; laboratory, four hours. Designed for doctoral students. Development of expertise and experience in collaborative work with faculty in Schools of Public Health and Medicine. Students meet with investigators for data analysis, implement data protocol when data is obtained, and write up study with lead investigators. S/U grading.

410. Statistical Methods in Clinical Trials. (4) Lecture, three hours; discussion, two hours. Requisites: courses 100A, 100B. Design of studies in animals to assess antitumor response; randomization, historical controls, sample size, statistical analysis in human experimentation; various types of controls; prognostic factors, survivorship studies, and design of prognostic studies; organization of clinical trials — administration, comparability, protocols, clinical standards, data collection and management. S/U (optional only for nonmajors) or letter grading.


413. Introduction to Pharmaceutical Statistics. (4) Lecture, three hours; discussion, one hour. Requisites: courses 100A, 100B. Exploration of various types of statistical techniques used in pharmaceutical and related industries. Topics include 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, and host campus instructor, department chair, and graduate dean. Used to record enrollment of UCLA students in courses taken under cooperative arrangements with USC. May not more than 8 units may be applied toward master’s degree minimum total course requirement; may not be applied toward minimum graduate course requirement. S/U grading.

596. Directed Individual Study or Research. (2 to 8) Tutorial, to be arranged. Limited to graduate students. Individual guided studies under direct faculty supervision. Only 4 units may be applied toward M.P.H. and 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.

Scope and Objectives

The Department of Chemical and Biomolecular Engineering conducts undergraduate and graduate programs of teaching and research that focus on the areas of biomolecular engineering, systems engineering, and advanced materials processing and span the general themes of energy/environment and nanotechnology. Aside from the fundamentals of chemical engineering (thermodynamics, transport phenomena, kinetics, reactor engineering and separations), particular emphasis is given to metabolic engineering, protein engineering, synthetic biology, bio-nano-technology, biomaterials, air pollution, environmental modeling, pollution prevention, molecular simulation, process systems engineering, membrane science, semiconductor processing, chemical vapor deposition, plasma processing, and polymer engineering.

Students are trained in the fundamental principles of these fields while acquiring sensitivity to society’s needs — a crucial combination needed to address the challenge of continued industrial growth and innovation in an era of economic, environmental, and energy constraints.

The undergraduate curriculum leads to a B.S. in Chemical Engineering and includes the standard core curriculum, as well as biomedical engineering, biomolecular engineering, environmental engineering, and semiconductor manufacturing engineering options. The department also offers graduate courses and research leading to 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 program is accredited by the Engineering Accreditation Commission of ABET. See http://www.abet.org.

The Chemical Engineering major is a designated capstone major. The capstone project requires students to first work individually and then learn how to integrate chemical engineering fundamentals taught in prior required courses; they then work in groups to produce a paper design of a realistic chemical process using appropriate software tools. Graduates should be able to design a chemical or biological system, component, or process that meets technical and economical design objectives, with consideration of environmental, social, and ethical issues, as well as sustainable development goals. In addition, they should be able to apply their knowledge of mathematics, physics, chemistry, biology, and chemical and biological engineering to analysis and design of chemical and biochemical processes and products; function on multidisciplinary teams; identify, formulate, and solve complex chemical and biological engineering problems; and communicate effectively, both orally and in writing.

Chemical Engineering B.S. Capstone Major

The chemical engineering curriculum provides a high quality, professionally oriented education in modern chemical engineering. The biomedical engineering, biomolecular engineering, environmental engineering, and semiconductor manufacturing engineering options provide students an opportunity for exposure to a subfield of chemical and biomolecular engineering. In all cases, balance is sought between engineering science and practice.

Chemical Engineering Core Option

Preparation for the Major

Required: Chemical Engineering 10; Chemistry and Biochemistry 20A, 20B, 20L, 30A, 30AL, 30B; Computer Science 31; Mathematics 31A, 31B, 32A, 32B, 39A, 39B; Physics 1A, 1B, 1C, 4AL, 4BL.

The Major

Required: Chemical Engineering 100, 101A, 101B, 101C, 102A, 102B, 103, 104A, 104B, 106, 107, 109, Chemistry and Biochemistry 113A, 113A; three technical breadth courses (12 units) selected from an approved list available in the Office of Academic and Student Affairs; two capstone analysis and design courses (Chemical Engineering 108A, 108B); and two elective courses (8 units) from Chemical Engineering 110, C111, C112, C113, C114, C115, C116, C118, C119, C121, C125, C135, C140.

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: Chemical Engineering 10; Chemistry and Biochemistry 20A, 20B, 20L, 30A, 30AL, 30B; Computer Science 31; Life Sciences 2, 3, 23L; Mathematics 31A, 31B, 32A, 32B, 33A, 33B; Physics 1A, 1B, 1C, 4AL.

The Major

Required: Chemical Engineering 100, 101A, 101B, 101C, 102A, 102B, 103, 104A, 104B, 106, 107, 109, Chemistry and Biochemistry 113A, 113A; three technical breadth courses (12 units) selected from an approved list available in the Office of Academic and Student Affairs; two capstone analysis and design courses (Chemical Engineering 108A, 108B); and one biomedical elective course (4 units)
from Chemical Engineering C115, C121, C124, C125, CM127, C135, or CM145 (another chemical engineering elective may be substituted for one of these with approval of the faculty adviser).

For information on University and general education requirements, see the College and Schools 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, 23L; Mathematics 31A, 31B, 32A, 32B, 33A, 33B; Physics 1A, 1B, 1C, 4A, 4L.

The Major
Required: Chemical Engineering 100, 101A, 101B, 101C, 102A, 102B, 103, 104A, 104D, 104DL, 107, 109, C115, C125, Chemistry and Biochemistry 113A, 153A; three technical breadth courses (12 units) selected from an approved list available in the Office of Academic and Student Affairs; two capstone analysis and design courses (Chemical Engineering 108A, 108B); and one biomolecular elective course (4 units) from Chemical Engineering C124, CM127, C135, or CM145 (course CM145 is recommended; another chemical engineering elective may be substituted with approval of the faculty adviser).

For information on University and general education 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, 4A, 4L.

The Major
Required: Chemical Engineering 100, 101A, 101B, 101C, 102A, 102B, 103, 104A, 104B, 106, 107, 109, Atmospheric and Oceanic Sciences 104, Chemistry and Biochemistry 113A, 153A; three technical breadth courses (12 units) selected from an approved list available in the Office of Academic and Student Affairs; two capstone analysis and design courses (Chemical Engineering 108A, 108B); and two elective courses (8 units) from Chemical Engineering 113, C116, C119, C121, C135, C140 (another chemical engineering elective may be substituted with approval of the faculty adviser).

For information on University and general education 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, 4A, 4BL.

The Major
Required: Chemical Engineering 100, 101A, 101B, 101C, 102A, 102B, 103, 104A, 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 Affairs; two capstone analysis and design courses (Chemical Engineering 109A, 109B); and one elective course (4 units) from Materials Science and Engineering 104, 120, 121, 122, or 150 plus one elective course (4 units) from Electrical Engineering 2, 100, 121B, 123A, or 123B.

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://grad.ucla.edu/gasada/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 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

101B. Transport Phenomena II: Heat Transfer. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. For information on University and general education requirements, see the College and Schools section earlier in this catalog.
109. Numerical and Mathematical Methods in Chemical and Biological Engineering. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Requisite: Computer Science 31. Corequisite: course 101A. Numerical methods for computation of solution of systems or linear and nonlinear algebraic equations, ordinary differential equations, and partial differential equations. Chemical and biological engineering examples used throughout to illustrate application of these methods. Use of MATLAB as platform to program solution of similar problems arising in chemical engineering. Letter grading.

110. Intermediate Engineering Thermodynamics. (4) Lecture, four hours; outside study, eight hours. Requisite: course 108A or equivalent. Use of fundamental thermodynamics and applications of statistical and phenomenological thermodynamics. Determination of partition function in terms of simple molecular models and spectroscopic data; nonideal gases; phase transitions and adsorption; nonequilibrium thermodynamics and coupled transport processes. Letter grading.

C111. Cryogenic and Low-Temperature Processes. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Requisites: courses 101A, 102B (or Materials Science 130). Fundamentals of cryogenics and cryogenic science pertaining to industrial low-temperature processes. Basic approach to an introduction of the tools needed for operation of cryogenic systems; low-temperature behavior of matter, optimization of cryosystems and other special conditions. Concurrently scheduled with course C211. Letter grading.

C112. Polymer Processes. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Requisites: course 101A, Chemistry 39A. Formation of polymers, criteria for selecting reaction scheme, polymerization techniques, polymer characterization. Mechanical properties. Rheology of macromolecules, polymer process engineering. Diffusion in polymeric systems. Polymer and biological applications and in microelectronics. Concurrently scheduled with course C212. Letter grading.

113. Air Pollution Engineering. (4) Lecture, four hours; preparation, two hours; outside study, six hours. Requisites: courses 101C, 102B. Integrated approach to air pollution, including concentrations of atmospheric pollutants, air pollution standards, air pollution sources and control technology, and relationship of air pollution to human health. Links of air pollution to multimedia environmental assessment. Letter grading.

C114. Electrochemical Processes and Corrosion. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Requisites: courses 101C or 125, 102B (or Materials Science 130). Fundamentals of electrochemistry and engineering applications to industrial electrochemical processes and metallic corrosion. Primary emphasis on fundamental approach to analysis of electrochemical and corrosion processes. Specific topics include corrosion of metals and semiconductors, electrochemical metal and semiconductor surface finishing, passivity, electrodeposition, electroless deposition, batteries and fuel cells, electrolysis and bioelectrochemical processes. May be concurrently scheduled with course C214. Letter grading.

C115. Biochemical Reaction Engineering. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Requisite: course 101C. Use of previously learned concepts of biophysical chemistry, thermodynamics, transport phenomena, and reaction kinetics to develop tools needed for technical design and economic analysis of biological reactors. May be concurrently scheduled with course CM215. Letter grading.

116. Surface and Interface Engineering. (4) Lecture, four hours; discussion, one hour; outside study, eight hours. Requisite: Chemistry 113A. Introduction to surfaces and interfaces of engineering materials, particularly catalytic surface and thin films for solid-state electronic devices. Topics include classification of crystals and surfaces, analysis of structure and composition of crystals and their surfaces and interfaces. Examination of engineering applications, including computer-aided design of electronic circuits, and solid-state laser. May be concurrently scheduled with course C216. Letter grading.


C121. Membrane Science and Technology. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Requisites: courses 101A, 101C, 103. Fundamentals of membranes and membrane processes, with emphasis on separations at micro, nano, and molecular/angstrom scale with membranes. Relationship between structure/morphology of dense and porous membranes and their separation characteristics. Use of nanotechnology for design of selective membranes and models of membrane transport (flux and selectivity). Examples provided from various fields/applications including biomedical devices, sensors, and biomedical devices. Concurrently scheduled with course C221. Letter grading.

C124. Cell Material Interactions. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Requisites: Life Sciences 2, 3, 23L. Introduction to design and synthesis of biomaterials for 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 therapeutic and to facilitate tissue regeneration. Use of stem cells in tissue engineering. Concurrently scheduled with course C224. Letter grading.

C125. Bioseparations and Bioprocess Engineering. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Requisites: courses 101A, 101C. Separation strategies, unit operations, and economic factors used to design processes for isolating and purifying materials like whole cells, enzymes, food additives, or pharmaceuticals that are products of biological reactors. Concurrently scheduled with course CM225. Letter grading.

CM127. Synthetic Biology for Biofuels. (4) Same as Chemistry CM127. Lecture, four hours; discussion, one hour; outside study, seven hours. Requisites: Chemistry 153A, Life Sciences 3, 23L. Engineering microorganisms for complex phenotype is common goal of metabolic engineering. 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 regulation and are aided by tools in bioinformatics, systems biology, and molecular biology. Fundamentals of metabolic biochemistry, protein structure and function, and bioinformatics. Use of molecular biology and engineering tools for designing metabolic networks to design microorganisms for energy applications. Concurrently scheduled with course CM227. Letter grading.

C135. Advanced Process Control. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Requisite: course 107. Introduction to advanced process control. Topics include (1) Lyapunov stability for autonomous nonlinear systems includ-
ing converse theorems, (2) input to state stability, interconnected systems, and small gain theorems, (3) design of controller structures for various classes of nonlinear systems, (4) model predictive control of linear and nonlinear systems, (5) advanced methods for tuning of classical controllers, and (6) introduction to control of distributed parameter systems. Concurrently scheduled with course C235. Letter grading.

C140. Fundamentals of Aerosol Technology. (4) Lecture, four hours; outside study, eight hours. Requi- site: chemistry or engineering major. P: General knowledge of the physics and mathematics of aerosol transport and deposition. Fundamental physics of aerosol transport and deposition are studied. Emphasis is placed on the application of aerosol transport and deposition phenomena to problems involving the deposition and removal of particulate matter from gases. Letter grading.

CM145. Molecular Biotechnology for Engineers. (4) (Same as Bioengineering CM145.) Lecture, four hours; discussion, one hour; outside study, seven hours. Requisites: Life Sciences 3, 23L. Selected top- ics in molecular biology that form foundation of bio- technology and biomedical industry today. Topics include recombinant DNA technology, molecular re- search tools, manipulation of gene expression, directed mutagenesis and protein engineering, DNA- based diagnostics and DNA microarrays, antibody and protein arrays, cellular and molecular diagnostics, genomics and bioin- formatics, isolation of human genes, gene therapy, and tissue engineering. Concurrently scheduled with course CM245. Letter grading.

188. Special Courses in Chemical Engineering. (4) Seminar, four hours; outside study, eight hours. Spec- ia! topics in chemical engineering for undergraduate students taught on experimental or temporary basis, such as those taught by visiting faculty. May be repeated for credit with approval of the faculty. Letter grading.

194. Research Group Seminars: Chemical Engi- neering. (4) Seminar, four hours; outside study, eight hours. Requisites: approval of instructor. Topics include: advanced treatment of mass transfer, with applica- tions to gas cleaning, commercial pro- cesses. Examination of engineering applications, in- teractions between structure/molecular properties of poly- merous membranes and their separation characteristics. Use of nanotechnology for design of selective mem- branes and models of membrane transport (flux and selectivity). Examples present fields/applications, including biotechnology, microelectronics, chemical processes, sensors, and biomedical devic- es. Concurrently scheduled with course C121. Letter grading.


CM225. Bioprocess and Bioprocess Engineer- ing. (4) (Same as Bioengineering 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 use with materials like whole cells, enzymes, food additives, or pharma- ceuticals. Concurrently scheduled with course C125. Letter grading.

CM227. Synthetic Biology for Biofuels. (4) (Same as Chemistry CM227.) Lecture, four hours; discus- sion, one hour; outside study, seven hours. Requi- sites: Chemistry 153A, Life Sciences 3, 23L. En- gineering synthetic microorganisms for complex, phenotype is a common goal of metabolic engineering and synthetic biology. Production of advanced biofuels involves de- signing and constructing novel metabolic networks in cells. Such efforts require profound understanding of biochemistry, protein structure, and biological regula- tions. Biological applications are used to illustrate scientific principles. Introduction to synthetic biology, biomolecular engineering, controlled release sys- tems, and reactor design; molecular and chemical transport to industrial separation processes, gas sampling, and biochemistry and engineering applications to industrial separation processes.
C240. Fundamentals of Aerosol Technology. (4) Lecture, four hours; laboratory, eight hours. Enforced requisite: course M270A. Introduction to aerosol science and engineering. Topics include aerosol generation mechanisms, aerosol properties, aerosol behavior in the environment, aerosol measurement techniques, and applications of aerosol technology in fields such as health, environmental science, and engineering. Letter grading.

283C. Analysis and Control of Infinite Dimensional Systems. (4) Lecture, four hours; outside study, eight hours. Requisites: courses M280A, M282A. Designed for graduate students. Introduction to advanced dynamical analysis and controller synthesis methods for nonlinear infinite dimensional systems. Topics include (1) linear operator and stability theory (basic results on Banach and Hilbert spaces, semigroup theory, convergence theory in function spaces), (2) nonlinear model reduction (linear and nonlinear, Galerkin and proper orthogonal decomposition), (3) nonlinear and robust control of nonlinear hyperbolic and parabolic partial differential equations (PDEs), (4) applications to transport-reaction problems. Letter grading.


290. Special Topics. (2 to 4) Seminar, four hours. Requisites for each offering announced in advance by department. Advanced and current study of one or more aspects of chemical engineering, such as chemical process dynamics and control, fuel cells and batteries, membrane transport, advanced chemical engineering analysis, polymers, optimization in chemical process design. May be repeated for credit with topic change. Letter grading.

M207. 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. Letter 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. May be repeated for credit. S/U grading.

495A. Teaching Assistant Training Seminar. (2) Seminar, two hours; outside study, four hours; one day in laboratory each quarter 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 materi-
al, including use of grading, advising, and rapport
with students. S/U grading.

495B. Teaching with Technology for Teaching As-
sistants. (2) Seminar, two hours; outside study, four
hours. Limited to graduate chemical engineering stu-
dents. Designed for teaching assistants interested in
learning more about effective use of technology and
ways to incorporate that technology into their class-

596. Directed Individual or Tutorial Studies. (2 to 8)
Tutorial, to be arranged. Limited to graduate chemical
engineering students. Petition forms to request enroll-
ment may be obtained from assistant dean, Graduate
Studies. Supervised investigation of advanced techni-

597A. Preparation for M.S. Comprehensive Exami-
nation. (2 to 12) Tutorial, to be arranged. Limited to
graduate chemical engineering students in M.S.
semiconductor manufacturing option. Reading and prepa-
rating for M.S. comprehensive examination. S/U grad-
ing.

597B. Preparation for Ph.D. Preliminary Examina-
tions. (2 to 16) Tutorial, to be arranged. Limited to
graduate chemical engineering students. S/U grading.

597C. Preparation for Ph.D. Oral Qualifying Exam-
nation. (2 to 16) Tutorial, to be arranged. Limited to
graduate chemical engineering students. Preparation
for oral qualifying examination, including preliminary

598. Research for and Preparation of M.S. Thesis.
(2 to 12) Tutorial, to be arranged. Limited to graduate
chemical 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 chemical engineering students. Usually tak-
en after students have been advanced to candidacy.
S/U grading.

William M. Gelbart, Ph.D.
Michael E. Jung, Ph.D.
Richard B. Kaner, Ph.D.
Carla M. Koehler, Ph.D.
Ohyun Kwon, Ph.D.
Christopher J. Lee, Ph.D.
Alexander J. Levine, Ph.D.
Raphael D. Levine, Ph.D.
James C. Liao, Ph.D.
Joseph A. Loo, Ph.D.
Harold G. Martinson, Ph.D.
Thomas G. Mason, Ph.D.
Heather D. Maynard, Ph.D.
Sabeeha Merchant, Ph.D.
Daniel Neuhauser, Ph.D.
C. Kumar N. Patel, Ph.D.
Emil Reisler, Ph.D.
Yves F. Rubin, Ph.D.
Benjamin J. Schwartz, Ph.D.
Yi Tang, Ph.D.
Sarah H. Tolbert, Ph.D.
John T. Wasson, Ph.D.
Paul S. Weiss, Ph.D.
Richard L. Weiss, Ph.D.
Mary M. Walsh, Ph.D.
Jeffrey J. Zink, Ph.D.

Professors Emeriti
Frank A.L. Anet, Ph.D.
Daniel E. Atkinson, Ph.D.
Kyle D. Bayes, Ph.D.
Paul D. Boyer, Ph.D. (Nobel laureate)
Richard E. Dickerson, Ph.D.
Mostafa A. El-Sayed, Ph.D.
Jay D. Gralla, Ph.D.
E. Russell Hardwick, Ph.D.
M. Frederick Hawthorne, Ph.D. (University Professor)
Charles M. Knoebler, 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.
Joan S. Valentine, Ph.D.
Charles A. West, Ph.D.

Associate Professors
Delroy A. Baugh, Ph.D.
Paula L. Diaconescu, Ph.D.
Yung-Ya Lin, Ph.D.
Craig A. Meric, Ph.D.

Assistant Professors
Anastasia N. Alexandrova, Ph.D.
Louis S. Brachard, Ph.D.
Margot E. Quinnian, Ph.D. (Alexander and Renee Kolin
Endowed Professor of Molecular Biology and
Biophysics)
Jorge Torres, Ph.D. (John McTagge Career
Development Professor of Chemistry and
Biochemistry)

Senior Lecturer S.O.E.
Artene A. Russell, Ph.D.

Senior Lecturers
Steven A. Hardinger, Ph.D.
Laurence Lavelle, Ph.D.

Lecturer
Eric R. Scerri, Ph.D.

Adjunct Professor
R. Stanley Williams, Ph.D.

Scope and Objectives
Chemistry is concerned with the composition, struc-
ture, and properties of substances, the transforma-
tions of these substances into oth-
ers by reactions, and the kinds of energy
changes that accompany these reactions. The
department is organized in four interrelated
and overlapping subdisciplines that deal pri-
marily with the chemistry of inorganic sub-
stances (inorganic chemistry), the chemistry of
organic 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). The Chemistry/Materials
Science major is designed primarily for stu-
dents in chemistry who want an emphasis on
material properties.

Undergraduate Study
Admission
Students entering UCLA directly from high
school who declare a Chemistry, Biochemistry,
or Chemistry/Materials Science major at the
time of application are automatically ad-
mitted 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 aver-
age 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 fol-
lowing 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; Chemistry/Materials Sci-
ence majors in the organic materials concen-
tration must complete a full year of organic
chemistry with laboratory in addition to the
other courses listed above.

Entering transfer students who have success-
fully completed a year course (including labo-
ratory) in general college chemistry intended
for science and engineering students should
enter course 30A. Transfer students should
consult the Undergraduate Advising Office
in 4006 Young Hall for assistance with the artic-
ulation 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 regard-
ing transfer selection for admission.

Advanced Placement in Chemistry
Students who have taken the Advanced Place-
ment (AP) Chemistry Examination and ob-
tained a score of 4 or 5 receive 8 units of
chemistry credit and may petition for chemistry credit.
and biochemistry equivalency, or may take course 20A at UCLA. If students received a score of 3 on the AP Chemistry Examination, 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 four majors: Chemistry (with concentrations in chemistry and physical chemistry), Biochemistry, General Chemistry, and Chemistry/Materials Science. 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. The Chemistry/Materials Science major provides appropriate preparation for graduate studies in fields that emphasize research involving chemistry, engineering, and applied science.

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 4006 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 (or 20AH), 20B (or 20BH), 20L, 30A, 30AL, 30B, 30BL, 30C, 30CL; Mathematics 31A, 31B, 32A, 32B, 33B; Physics 1A, 1B, and 1C (or 1AH, 1BH, and 1CH), 4BL.

The Major
Required: Chemistry and Biochemistry 110A, 110B, 113A, 113B, 114 (or 114H), 153A, 153L, 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/undergraduate 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 (or 20AH), 20B (or 20BH), 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) and 4BL, or 6A, 6B, and 6C (or 6AH, 6BH, and 6CH).

The Major
Required: Chemistry and Biochemistry 110A, 115A, 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/undergraduate 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 (or 20AH), 20B (or 20BH), 20L, 30A, 30AL, 30B, 30BL, 30C, 30CL; Mathematics 31A, 31B, 32A, 32B, 33B, Physics 1A, 1B, and 1C (or 1AH, 1BH, and 1CH), 4BL.

Students must complete the preparation courses with at least a 2.0 grade-point average.

The Major
Required: Chemistry and Biochemistry 110A, 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.

Chemistry/Materials Science B.S.
The Chemistry/Materials Science major is designed for students who are interested in chemistry with an emphasis on material properties and provides students the opportunity to gain expertise in both chemistry and the science and engineering in materials such as semiconductors, photonic materials, polymers, biomaterials, ceramics, and nano-scale structures. Students explore the reactivity of such materials in different environments and gain understanding of how chemical compositions affect properties. The major provides appropriate preparation for graduate studies in many fields emphasizing interdisciplinary research, including chemistry, engineering, and applied science.

Preparation for the Major
Required: Chemistry and Biochemistry 20A (or 20AH), 20B (or 20BH), 20L, 30A, 30AL, Mathematics 31A, 31B, 32A, 32B, 33B, Physics 1A, 1B, 1C, 4BL.

The Major
Required: Chemistry and Biochemistry 110A, 113A, 171, 172 or C180 or C181, 185, 4 units from 110B, C113B, 172, C174, C175, C176, C180, C181; Materials Science and Engineering 104, 110, 110L, 120, 121 or 150 or 160, 131, 8 units from C111, 121, 122, 132, 150, 160, 162, CM180; 7 laboratory units from Chemistry and Biochemistry 114, 184, Materials Science and Engineering 121L, 131L, 161L.

The following courses may be applied only once toward the major: Chemistry and Biochemistry 172, C180, C181, Materials Science and Engineering 121, 150, 160.

Organic Materials Concentration
Preparation for the Major
Required: Chemistry and Biochemistry 20A (or 20AH), 20B (or 20BH), 20L, 30A, 30AL, 30B, 30BL, 30C, 30CL; Mathematics 31A, 31B, 32A, 32B, 33B, Physics 1A, 1B, 1C, 4BL.
The Major

Required: Chemistry and Biochemistry 110A, 113A, 136, 171, 185, 4 units from 110B, C113B, C143A, 144, 172, C174, C175, C180, C181; Materials Science and Engineering 104, 110, 110L, 120, 150, 4 units from C111, 121, 122, 131, 132, 160, 162, CM180; 7 laboratory units from Chemistry and Biochemistry 114, 184, Materials Science and Engineering 121L, 131L, 161L.

Honors Program

Admission

The honors program provides exceptional Chemsitry 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, and requirements for the major, may apply for admission. Students must have the sponsorship of an approved faculty advisor.

For further information and application forms, students should consult the Undergraduate Advising Office, 4006 Young Hall, early in their educational planning. Completed applications must be submitted at least two weeks prior to the term in which students plan to begin the honors program.

Requirements

The core of the program consists of at least one approved undergraduate seminar course from Chemistry and Biochemistry 193A or 193B and three research courses (12 units minimum) from 196A, 196B, or 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 sponsor, and with the approval of the thesis by the departmental honors committee, students are awarded no honors, honors, or highest honors.

Students who have a grade-point average of 3.6 or better, both overall and in the major, and demonstrated exceptional accomplishment on the research thesis are awarded highest honors at the discretion of the departmental honors committee.

Computing Specialization

Majors in Chemistry and Biochemistry may select a specialization in Computing by (1) satisfying all the requirements for a bachelor's degree in the specified major, (2) completing Program in Computing 10A, 10B, and one course from 10C, 15, 20A, 30, or 60, and (3) completing two computational chemistry courses from Chemistry and Biochemistry 126A, 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).

Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website, http://grad.ucla.edu/gasasa/liburgy/pgmrojintro.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 (Phil.), and Doctor of Philosophy (Ph.D.) degrees in Chemistry and Master of Science (M.S.), Candidate in Philosophy (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 word of chemistry, ranging from protons to proteins in subject matter. P/NP or letter grading.

7. Nanoscience and Nanotechnology Laboratory. (2) Seminar, discussion, and laboratory, 32 hours. Limited to high school students. Key concepts of nanoscience and nanotechnology, including various approaches to nanofabrication (bottom-up and top-down). Fabrication of nanostructures and devices, collection of scientific data using those devices, analysis of data, and presentations of student results. Offered in summer. Preparation: high school science. Not open to students with credit for course 20A. Introduction to physical and general chemistry principles; atomic structure based on quantum mechanics; atomic properties; trends in periodic table; chemical bonding (Lewis structures, VSEPR theory, hybridization, and molecular orbital theory); gaseous and aqueous equilibria; properties of inorganic and organic acids, bases, buffers; titrations. P/NP or letter grading.

14B. General and Organic Chemistry Laboratory I. (3) Lecture, four hours; discussion, one hour. Preparation: high school chemistry or equivalent background and three and one-half years of high school mathematics. First term of general chemistry. Survey of chemical processes, quantum chemistry, atomic and molecular structure and bonding, molecular spectroscopy, P/NP or letter grading.

14AH. General and Organic Chemistry Laboratory II. (4) Lecture, four hours; discussion, one hour. Preparation: high school chemistry or equivalent background and three and one-half years of high school mathematics. Honors course parallel to course 20A. P/NP or letter grading.

20A. Chemical Structure and Reaction. (4) Lecture, three hours; discussion, one hour. Preparation: high school chemistry or equivalent background and three and one-half years of high school mathematics. Study of high school physics, first term of general chemistry. Survey of chemical processes, quantum chemistry, atomic and molecular structure and bonding, molecular spectroscopy, P/NP or letter grading.

20AH. Chemical Structure and Reaction (Honors). (4) Lecture, three hours; discussion, one hour. Preparation: high school chemistry or equivalent background and three and one-half years of high school mathematics. Honors course parallel to course 20A. P/NP or letter grading.

20B. Chemical Structure and Reaction. (4) Lecture, three hours; discussion, one hour. Preparation: high school chemistry or equivalent background and three and one-half years of high school mathematics. Study of high school physics, first term of general chemistry. Survey of chemical processes, quantum chemistry, atomic and molecular structure and bonding, molecular spectroscopy, P/NP or letter grading.

20BH. Chemical Structure and Reaction (Honors). (4) Lecture, three hours; discussion, one hour. Preparation: high school chemistry or equivalent background and three and one-half years of high school mathematics. Honors course parallel to course 20B. P/NP or letter grading.
30A. Organic Chemistry I: Structure and Reactivity. (4) Lecture, three hours; discussion, one hour. Enforced requisites: courses 20B or 20BH, with grade of B+ or better. Honors course parallel to course 30A. P/NP or letter grading.

30AH. Organic Chemistry I: Structure and Reactivity (Honors). (4) Lecture, three hours; discussion, one hour. Enforced requisites: courses 20B or 20BH and 20L, with grades of C– or better. Enforced corequisite: course 20A or 20AH. Qualitative and quantitative analysis of chemical reactions and compounds, kinetics, separations, and spectroscopy. P/NP or letter grading.


30BL. Organic Chemistry Laboratory I. (3) Lecture, one hour; laboratory, four hours. Enforced requisites: courses 20A or 20AH and 20L, with grades of C– or better. Enforced corequisite: course 20A or 20AH. Basic experimental techniques in organic synthesis (distillation, extraction, crystallization, and performing reactions) and organic analytical chemistry (melting and boiling points, 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. Third term of organic chemistry for Chemistry, Biochemistry, and engineering majors. Classes focus on concepts that guide data analysis rather than experimental data of genomics, as well as computational tools for analyzing them. Biochemistry and molecular biology dissected life into its component parts, one gene at a time, and how mechanisms for putting this information back together to predict what happens in complete organism (e.g., over 80 percent of drug candidates fail in clinical trials). High-throughput technologies: sequencing, microarrays, mass-spec, and robotics have given biologists incredible new capabilities to analyze complete genomes, expression patterns, functions, and interactions across whole populations, and species. Use and analysis of such datasets becomes essential daily activity for biomedical scientists. Core principles and methodologies for analyzing genomics data to answer biological and medical questions, with focus on concepts that guide data analysis rather than algorithm details. Concurrently scheduled with course C200. P/NP or letter grading.

103. Environmental Chemistry. (4) Lecture, four hours; discussion, one hour. Enforced requisites: courses 30B, 30BL, 110A, 113A (or 153A), 153L. Chemical aspects of air and water pollution, solid waste disposal, energetics and environmental reactions in environment and effect of chemical processes on environment. P/NP or letter grading.

104. Environmental Chemistry Laboratory. (4) (Same as Atmospheric and Oceanic Sciences M140L) Lecture, four hours; discussion, one hour. Enforced requisite: course 20B. 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.

105. Introduction to Chemistry of Biology. (4) Lecture, three hours; discussion, one hour. Honored requisite: course 153A with grade of C– or better. Introduction to chemical biology. Topics include computational chemical biology, utility of synthesis in bio-chemical research, pepidonomics, designed agents for cellular imaging, natural product biosynthesis, protein engineering and directed evolution, cell biology of disease, imine cells, metal-containing drugs. Concurrently scheduled with course CM205A. Letter grading.

108B-8Z2. Lower Division Seminars. (2-2) Seminar, two hours. Limited to freshmen/sophomores. General introduction to frontiers of molecular sciences or intensive exploration of particular theme or topic. Concurrent 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 discoveries in science that have had significant impact on society and analysis of circumstances that brought these about, beginning with discovery of helium in 1895 and of radioactivity by Becquerel in 1896. Other topics include conceptual antithesis to medicine such as penicillin by Fleming in 1928 and cis-platin by Rosenberg in 1969. P/NP or letter grading.

106. Special Courses in Chemistry. (1 to 4) Tutorial, to be arranged. May be repeated for maximum of 8 units. P/NP or letter grading.

98XA. 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. Demands interpersonal skills in collaborative learning environment. May be repeated four times, but only 1 unit may be applied toward graduation. P/NP grading.

98XB. PEERS Collaborative Learning Workshops for Physical Sciences and Engineering Majors. (1) Laboratory, three hours. Corequisite: associated undergraduate lecture course in chemistry and biochemistry for physical sciences and engineering majors. May be repeated four times, but only 1 unit may be applied toward graduation. P/NP grading.

Upper Division Courses

C100. Genomics and Computational Biology. (5) Lecture, three hours; discussion, one hour. Honored requisite: course 153B, Microbiology 132, Molecular, Cell, and Developmental Biology 144, or 165B. Introduction to bioinformatics and experimental data of genomics, as well as computational tools for analyzing them. Biochemistry and molecular biology dissected life into its component parts, one gene at a time, and how mechanisms for putting this information back together to predict what happens in complete organism (e.g., over 80 percent of drug candidates fail in clinical trials). High-throughput technologies: sequencing, microarrays, mass-spec, and robotics have given biologists incredible new capabilities to analyze complete genomes, expression patterns, functions, and interactions across whole populations, and species. Use and analysis of such datasets becomes essential daily activity for biomedical scientists. Core principles and methodologies for analyzing genomics data to answer biological and medical questions, with focus on concepts that guide data analysis rather than algorithm details. Concurrently scheduled with course C200. P/NP or letter grading.

101. Environmental Chemistry. (4) Lecture, four hours; discussion, one hour. Enforced requisites: courses 30B, 30BL, 110A, 113A (or 153A), 153L. Chemical aspects of air and water pollution, solid waste disposal, energetics and environmental reactions in environment and effect of chemical processes on environment. P/NP or letter grading.

C110B. Physical Chemistry: Introduction to Molecular Spectroscopy. (4) Lecture, three hours; discussion, one hour; tutorial, one hour. Enforced requisite: course 110A. Interaction of radiation with matter, microwave spectroscopy, infrared and Raman spectroscopy, vibrational, polyatomic molecular spectra, magnetic resonance spectroscopy, and magnetic resonance spectroscopy. Concurrently scheduled with course C213B. P/NP or letter grading.

114. Physical Chemistry Laboratory. (5) Lecture, two hours; laboratory, eight hours. Enforced requisites: courses 30A, 30AL, 110A, and 113A, with grades of C– or better. Honored requisite: course 110B or C113B. Lectures include techniques of physical measurement, error analysis and statistics, special topics. Laboratory includes spectroscopy, thermodynamic measurements, and chemical dynamics. P/NP or letter grading.

114H. Physical Chemistry Laboratory (Honors). (5) Lecture, three hours; laboratory, eight hours. Enforced requisites: courses 30A, 30AL, 110A, and 113A, with grades of B or better. Honored corequisite: course 110B or C113B. Lectures include techniques of physical measurement, error analysis and statistics, special topics. Laboratory includes topics in physical chemistry to be selected in consultation with instructor. P/NP or letter grading.

C115A-C115B. Quantum Chemistry. (4-4) Lecture, four hours; discussion, one hour. Enforced requisites: courses 113A, Mathematics 31A, 31B, 32A, 32B, 33A, with grades of C– or better. Recommended: knowledge of differential equations equivalent to Mathematics 134 or 135 or Physics 131 and of analytic mechanics equivalent to Physics 105A. Course C115A or Physics 115A with grade of C– or better is requisite to course C115B. Students entering course C115A are expected to take course C115B in following term. Designed for chemistry students with serious interest in quantum chemistry. Postulates and systematic developments of non-relativistic quantum mechanics: expansion theorems; wells; oscillators; angular momentum; hydrogen atom; matrix techniques; approximation methods; time dependent problems; atoms; spectroscopy; magnetic resonance. May be concurrently scheduled with courses C215A-C215B. P/NP or letter grading.

C115C. Advanced Quantum Chemistry: Applications. (4) Lecture, three hours; discussion, one hour. Enforced requisites: courses 113A, C115B. Topics in quantum chemistry selected from molecular structure, collision processes, theory of solids, symmetry and its applica-
tions, and theory of electromagnetic radiation. Concurrently scheduled with course C212C. P/NP or letter grading.

C122. Mathematical Methods for Chemistry. (4) Lecture, four hours; laboratory, eight hours. Enforced requisites: Mathematics 31A, 31B, 32A, 32B. Review of basic mathematics necessary to study physical chemistry at graduate level, with focus on review of vectors, linear algebra, elementary complex analysis, and solution of ordinary and partial differential equations. Development of problem-solving skills through homework based on these mathematical techniques, with examples from physical chemistry. Concurrently scheduled with course C222. P/NP or letter grading.

C123A-C123B. Classical and Statistical Thermodynamics. (5) Lecture, four hours; discussion, one hour. Requisite: course 110B. Recommended: course 113A. Topics of considerable research interest presented at level suitable for students who have completed junior-year courses in physical chemistry. P/NP or letter grading.


C140. Bionanotechnology. (4) Lecture, three hours. Requisites: courses 30C, 110A. Basic physical, chemical and biological principles for bio-inspired nanotechnologies. May be concurrently scheduled with course C240. P/NP or letter grading.

C140A. Theoretical and Computational Organic Chemistry. (2) Lecture, two hours; discussion, one hour. Concurrently scheduled with course C220A-C220B. P/NP or letter grading.

125. Computers in Chemistry. (4) Lecture, three hours. Preparation: working knowledge of Fortran IV or PL/I. Requisites: courses 110A, 110B, 113A. Discussion of computer programs, including matrix manipulation, solution of differential equations, data acquisition, and instrumental control, and their applications to chemical problems in quantum mechanics, thermodynamics, 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: courses 110A, 110B. Analysis of electronic periodic properties in terms of molecular orbital theory; application of computer programs to chemical problems, including the use of FORTRAN/77. P/NP or letter grading.

130. Biochemistry: Introduction to Structure, Enzymes, and Metabolism (Honors). (4) Lecture, three hours; discussion, one hour. Requisite: course 14D or 30B, with grade of C– or better. Recommended: Life Sciences 2, 3, 23L. Honors course parallel to course 130A. P/NP or letter grading.

131B. Biochemistry: DNA, RNA, and Protein Synthesis. (4) Lecture, three hours; discussion, one hour. Concurrently scheduled with course 135A or 135AH, Life Sciences 2, 3, 23L. Nucleotide metabolism and protein synthesis. Regulation of transcription and translation machinery; regulation of transcription; RNA structure and processing; protein synthesis and processing. P/NP or letter grading.

132B. Biochemistry: DNA, RNA, and Protein Synthesis (Honors). (4) Lecture, three hours; discussion, one hour. Concurrently scheduled with course 135B. P/NP or letter grading.
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Statistics 100A, and Computer Science 32 or Program in Computing 10C with grade of C– or better. Prior knowledge of statistics required. Designed for engineering students as well as students from biological sciences and medical school. Introduction to bioinformatics and methodologies, with emphasis on concepts and inventing new computational and statistical technological data. Focus on sequence analysis and alignment algorithms. Concurrently scheduled with course CM260A. P/NP or letter grading.

CM160B. Algorithms in Bioinformatics and Systems Biology. (4) (Formerly numbered C160B.) (Same as Computer Science CM122.) Lecture, four hours; discussion, two hours. Recommended requisites: Biological Sciences 10A or Mathematics 170A or Statistics 100A, and Computer Science 32 or Program in Computing 10C with grade of C– or better. Course CM160A is not requisite to CM160B. Designed for engineering students as well as students from biological sciences and medical school. Development and application of computational approaches to biological questions, with focus on formulating interdisciplinary problems as computational problems and then solving these problems using algorithmic techniques. Computational techniques include those from statistics and computer science. Concurrently scheduled with course CM260A. P/NP or 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. Concurrently scheduled with course C161A. 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 dioxygen, its role in mitochondrial metabolism, neurodegenerative diseases, apoptosis, and control of cell proliferation, 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. Concurrently scheduled with course C264A. 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 control of metabolic states by covalent modification of proteins, including phosphorylation and methylation reactions. Concurrently scheduled with course C265B. Letter grading.

166. RNA Structure, Recognition, and Function. (4) Lecture, three hours; discussion, one hour. Enforced requisites: courses 153A, 153B, Life Sciences 3, 23L. Recent years have seen explosion in biochemical characterization of diverse structures and functions of RNA molecules in metabolism of living systems. RNA has been shown to act both as catalyst in living systems and as potent modulator of gene expression control at every level of gene expression pathways. RNA molecules, RNA processing, translation, degradation), RNA molecules now being used as therapeutic agents in gene therapy approaches. Coverage of these various aspects and in-depth analysis of RNA structure and function, using primary research literature and analysis of molecular structures of RNA and RNA-protein complexes. Letter grading.

CM170. Biochemistry and Molecular Biology of Photosynthesis. (2 to 4) (Same as Molecular, Cell, and Developmental Biology M170.) Lecture, two to three hours; discussion, zero to two hours. Requisites: courses 153A and 153B, or Life Sciences 3 and 23L. Recommended: courses 153C, 154, Life Sciences 4. Light harvesting, photochemistry, electron transfer, carbon fixation, carboxylate metabolism, pigment synthesis in chloroplasts and bacteria, Assembly of photosynthetic membranes and regulation of genes encoding those components. Emphasis on understanding of experimental approaches. Concurrently scheduled with course C275B. P/NP or letter grading.

171. Intermediate Inorganic Chemistry. (4) Lecture, three hours; discussion, one hour. Requisite: course 30B with grade of C– or better. Chemical bonding; structure and bonding in solid state; main group; transition metal chemistry; reactions and reactions; catalysis, spectroscopy, special topics. P/NP or letter grading.

172. Advanced Inorganic Chemistry. (4) Formerly numbered C172.) Lecture, three hours; discussion, one hour. Requisite: course 171 with grade of C– or better. Systematic approach to modern inorganic chemistry, structure and bonding of inorganic molecules and solids, structure/reactivity relationships, vi-brational spectroscopy, electronic structure and ligand-field theory, mechanisms of inorganic reactions, bonding and spectroscopy of organometallic compounds, transition metals in catalysis and biology, P/NP or letter grading.

C174. Inorganic and Metallorganic 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, inorganic materials; Schlenck techniques; chromatographic and ion exchange methods; spectroscopic characterization and literature assignment. Concurrently scheduled with course C274. P/NP or letter grading.

C175. Inorganic Reaction Mechanisms. (4) Lecture, three hours. Requisites: courses 110A, 110B, 113A, and 172, with grades of C– or better. Survey of inorganic reactions; mechanistic principles; electron transport and storage; introduction to metalloenzyme chemistry. 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 metabolism, including transport and storage; introduction to metalloenzymes; metalloproteins in electron transfer; respiration, and photosynthesis. P/NP or letter grading.

C180. Solid-State Chemistry. (4) Lecture, three hours. Requisite: course 172 with grade of C– or better. Survey of new methods and materials for their preparation and characterization, with emphasis on band theory and its relationship to chemical, optical, transport, and magnetic properties, leading to deeper understanding of these materials. Concurrently scheduled with course C280. 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 properties of polymers, polymer characterization methods, and special topics such as conducting and biophysical polymers and polymeric agents in synthetic biology. 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. Theoretical and practical aspects 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.

185. Materials Chemistry Laboratory. (5) (Formerly numbered C185.) Lecture, two hours; laboratory, eight hours. Enforced requisites: courses 30AL, 110A, 113A, 171. Materials synthesis and physical properties of complex materials. Combines synthetic skills with fundamental physical understanding and characterization in approximately equal proportions to relate materials synthesis to materials function. Letter grading.

192A–192B. Graduate Undergraduate Assistance Program in Chemistry and Biochemistry. (4–4) Seminar, one hour; assigned setting, six hours (course 192C) or five hours (course 192D). Limited to juniors/ seniors. Training and supervised practicum for advanced undergraduate students in chemistry and biochemistry. Students assist in preparation of materials and development of innovative programs under guidance of faculty members and teaching assistants. May not be applied toward course requirements for any departmental major. Individual contract required. Information and contracts may be obtained from department. P/NP grading.

193A. 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 who have strong commitment to pursuing graduate study 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. P/NP grading.

193B. Journal Club Seminars: Chemistry and Biochemistry. (2) Seminar, three hours. Limited to undergraduate students. Discussion of readings selected from current literature in particular field. May be repeated for credit. P/NP grading.

194. Research Group Seminars: Chemistry and Biochemistry. (1) Seminar, three hours. Designed for undergraduate students who are part of research group. Advanced study and analysis of current topics in chemistry 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. Limited to juniors/seniors. Entry-level research apprenticeship for upper division students under guidance of faculty mentor. Consult department for additional information regarding requirements, enrollment petitions, and written proposal deadlines. May be repeated for maximum of 8 units. Individual contract required. P/NP or letter 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 un-
Graduate Courses

C200. Genomics and Computational Biology. (5) Lecture; three hours; discussion, one hour. Enforced requisite: course 153B, Microbiology 132, Molecular, Cell, and Developmental Biology 144, or 165B. Introduction for biochemistry students of technologies and experimental data of genomics, as well as computational tools for analyzing them. Biochemistry and molecular biology dissected life into its component parts, one gene at a time. Integrated integrative mechanisms for putting this information back together to predict what happens in complete organism (e.g., over 80 percent of drug candidates fail in clinical trials). High-throughput technologies such as sequencing, microarrays, mass-spect, and robots have given biologists incredible new capabilities to analyze complete genomes, expression patterns, functions, and interactions across whole organisms, populations, and species. Use and analysis of such datasets becomes essential daily activity for biomedical scientists. Core principles and methodologies for analyzing genomics data to address biological and medical questions, with focus on concepts that guide data analysis rather than algorithm details. Concurrently scheduled with course 113A.

201. Scientific Proposal Writing. (2) Lecture, three hours. Designed for graduate biochemistry and molecular biology students. How to write scientific proposals to be submitted to funding agencies. How to develop a scientific hypothesis, put together grant proposals, and critique proposals. Letter grading.

M202. Bioinformatics Interdisciplinary Research Seminar. (4) (Formerly numbered 202.) (Same as Bioinformatics M202.) Seminar, two hours; discussion, two hours. Confront some of the big 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.

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. (Seminar, two hours; discussion, two hours. Enforced requisite: course 203A or 203B or 203C. Cellular and molecular biology Ph.D. students continue to learn how to conduct research in a field to reliably advance knowledge while maintaining ethical principles. Designed to be taken in fourth or fifth year of Ph.D. work where students would have already been exposed to many challenges of performing and reporting experiments and who are in stage of their career when they might begin to think of applying for postdoctoral fellowships and research and teaching positions. Course helps fulfill training requirement for research integrity in NIH training grants and individual NRSA awards. S/U grading.

204. Student Research Seminar. (2) Seminar, one hour. Limited to students supported by UCLA program in Chemistry/Biology Interface Predoctoral Training. Research seminar presented by second- and third-year students. S/U grading.

CM205A. Introduction to Chemistry of Biology. (4) (Formerly numbered M205A.) (Same as Pharmacology M205A.) Lecture; discussion, four hours; laboratory, one hour. Enforced requisite: course 153A with grade of C– or better. Introduction to chemical biology. Topics include computational chemical biology, utility of synthetic in biochemistry research, peptidomimetics, design of reagents for small protein solutions, analysis of synthetic biologist, protein engineering and directed evolution, cell biology of metal ions, imaging metal ions in cells, metallo-organometallic chemistry, and is currently scheduled with course C105. Letter grading.

M205B. Issues on Chemistry/Biology Interface. (2) (Same as Pharmacology M205B.) Seminar, one hour. Requisite: course CM205A. Selected topics presented by faculty on solving problems, utilizing tools in chemistry and molecular biology on chemistry/biology interface (CBI) S/U grading.

206. Chemistry of Biology Seminar. (2) Seminar, three hours. Limited to students supported by UCLA program in Chemistry/Biology Interface Predoctoral Training. Current research topics at interface of chemistry and biology. May be repeated for credit. S/U grading.

207. Organometallic Chemistry. (4) Lecture; discussion, three hours. Requisite or corequisite: course C243A. Survey of synthesis, structure, and reactivity (emphasizing mechanistic approach) of compounds containing carbon bonded to elements selected from main group elements, transition metals, and main group metals, including olefin complexes and metal carbonyls; applications in catalysis and organic synthesis. S/U or letter grading.

C208. Mass Spectrometry for Chemists and Biochemists. (2) Lecture, one hour; laboratory, four hours. Requisite: course 153A. Introduction to principles and practice of organic and inorganic mass spectrometry. Topics include EI, CI, ICPMS, GC/MS, LC/MS, ESI, MALDI, MS/MS protein identification, and proteomics. Concurrently scheduled with course C108. S/U or letter grading.

209. Introduction to Chemistry Research. (Seminar, two hours. Half-hour presentations each session by three different chemistry professors to introduce their research programs. S/U grading.

210. Scientific Glassblowing. (1) Lecture, one hour. Instruction in safe handling and manipulation of scientific glassware. Introduction to basic techniques for cutting glass and repair of cracks.

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/visible Raman spectroscopy, vibrations in polyatomic molecules, electronic spectroscopy, magnetic resonance spectroscopy. Concurrently scheduled with course C113B. Independent study project required of graduate students. S/U or letter grading.

C215A-C215B. Quantum Chemistry. Methods. (4-4) Lecture, four hours; discussion, one hour. Requisites: course 113A, Mathematics 31A, 31B, 32A, 32B, 33A, with grades of C– or better. Recommended: Knowledge of one of the following: course 134 or 135 or Physics 105A. Course 153A is normally expected to take course C215B in following term. Designed for chemistry students with serious interest in quantum chemistry. Postulates and systematic development of nonrelativistic quantum mechanics: probability, ensembles, partition functions. May be concurrently scheduled with courses C115A-C115B. S/U or letter grading.


215D. Molecular Spectra, Diffraction, and Structure. (4) Lecture, three hours; discussion, one hour. Requisites: course C215B, Physics 131. Selected topics from electronic spectra of atoms and molecules; vibrational, rotational, and Raman spectra; magnetic resonance spectra; X-ray, neutron, and electron diffraction; coherence effects. S/U or letter grading.

218. Physical 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.

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 Reactions.

219F. Spectroscopy of Isolated Molecules, Complexes, and Clusters.

219G. Chemistry and Biophysics of Interfaces.


219I. Modern Methods for Molecular Reactions and Structure.

219J. Cosmochemistry.

219K. Ultrafast Studies of Chemical Reaction Dynamics in Condensed Phase.

219L. Kinetic, Thermodynamic, and Interfacial Effects in Materials.

219M. Nanoscience.


219P. Complex Fluids: Composition, Structure, and Rheology.


219T. Single-Cell Physiology.

219U. Advanced Topics in Physical Chemistry. (2 to 4 each) Lecture, two to four hours. Each course will emphasize some feature of physical chemistry, generally taught by faculty members whose research interests embrace that specialty. S/U or letter grading.

222. Mathematical Methods for Chemistry. (4) Lecture, four hours. Enforced requisite: Mathematics 31A, 31B, 32A, 32B, 38. Review of basic mathematics necessary to study physical chemistry at graduate level, with focus on review of vectors, linear algebra, elementary complex analysis, and solution of ordinary and partial differential equations. Development of problem-solving skills through homework based on these mathematical techniques, with examples from physical chemistry. Concurrently scheduled with course C122. S/U or letter grading.

C223A-C223B. Classical and Statistical Thermodynamics. (4-4) Lecture, four hours; discussion, one hour. Requisite: course 110B or 156. Recommended: course 113A. Presentation of fundamentals of classical thermodynamics. Principles of statistical thermodynamics: probability, ensembles, partition functions, independent mole and perfect gas. Applications of classical and statistical thermodynamics selected from diatomic and polyatomic gases, solid and fluid phases, phase equilibria, electric and magnetic effects, one-phonon hydrogen, chemical equilibrium, reaction rates, perfect gas, nonelectrolyte and electrolyte solutions, surface phenomena, high polymers, gravitation. May be concurrently scheduled with courses C123A-C123B. S/U or letter grading.

226A. Computational Methods for Chemists. (4) Lecture, four hours; laboratory, four hours. Preparation: programming experience in either BASIC, FORTRAN, C, C++, Java, or Pascal. Requisites: courses 110A, 113A, Mathematics 33B. Theoretical, numerical, and computational techniques for applications, which include simple force fields and resulting statistical mechanics for simple molecules, simple ab-initio methods for organic molecules and nanomaterials, and classical dynamics and spectroscopy. Concurrently scheduled with course C216A. S/U or letter grading.

CM227. Synthetic Biology for Biofuels. (4) (Same as Chemistry 227.) Lecture, four hours; discussion, one hour. Requisite: course 153A, Life Sciences 3, 23L. Engineering microorganisms for complex phenotype is common goal of metabolic engineering and synthetic biology. Production of advanced biofuels involves designing and constructing novel metabolic networks in cells. Such efforts require profound understanding of biochemistry, protein structure, and biological regulations and are aided by tools in bioinformatics, systems biology, and molecular biology. Fundamentals of metabolic biochemistry, protein structure and function, and bioinformatics. Use of systems modeling for metabolic networks to design microorganisms for energy applications. Concurrently scheduled with course CM127. S/U or letter grading.

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.

M230B. Structural Molecular Biology. (4) (Same as Molecular, Cell, and Developmental Biology M230B.) Lecture, three hours; discussion, one hour. Requisites: Mathematics 3C, Physics 6C. Selected topics from principles of biological structure; structures of globular proteins and RNAs; structures of fibrous proteins, nucleic acids, and polysaccharides; harmonic analysis and Fourier transforms; principles of electron, neutron, and X-ray diffraction; optical and computer filtering; three-dimensional reconstruction. S/U or letter grading.

M230D. Structural Molecular Biology Laboratory. (2) (Same as Molecular, Cell, and Developmental Biology M230D.) Laboratory, 10 hours. Corequisite: course M230B. Methods in structural molecular biology, including expression, purification, single-particle, low angle X-ray diffraction, electron diffraction, optical diffraction, optical filtering, three-dimensional reconstruction from electron micrographs, and model building. S/U or letter grading.


235A-235Z. Special Topics in Organic Chemistry. (4) Lecture, two hours; discussion, one hour. Requisites: courses 30C, 113A. Applications of quantum mechanical concepts and methods to understand and predict organic structures and reactivities. Computational modeling methods, including laboratory experience with force-field and quantum mechanical computer calculations. Concurrently scheduled with course C145. 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 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.


251A-251Z. Special Topics in Biochemistry. (2 each) Lecture, two to four hours. Designed primarily for first- and second-year graduate students as preparation for cumulative examinations. Problems in organic reaction mechanisms, synthesis, structure determination, stereochemistry, spectroscopy, electronic theory, photochemistry, and organometallic chemistry, with emphasis on current literature. May be repeated for credit. S/U grading.

251A-251Z. Special Topics in Biochemistry. (2 each) Lecture, two to four hours. Each course encompasses one recognized specialty in biochemistry, generally taught by faculty members whose research interests embrace that specialty. S/U or letter grading.

252. Seminar: Advanced Methods in Computational Biology. (2) (Same as Bioinformatics M252 and Human Genetics M252.) Seminar, one hour; discussion, one hour. Designed for advanced graduate students. Examination of computational methodology in bioinformatics and computational biology through presentation of current research literature. How to select and apply methods from computational and mathematical disciplines to problems in bioinformatics and computational biology: development of novel methodologies. S/U or letter grading.

256A-256Z. Seminars: Research in Biochemistry. (2 each) Seminar, three hours. Advanced study and analysis of current topics in biochemistry. Discussion of current research and literature in research specialty of faculty member teaching course. S/U grading:

256A. Biochemistry of Plasma Proteins.
256B. Biochemistry of Protein Function.
256C. Biochemistry and Molecular Genetics of Fungi.
256D. Transcriptional Control Mechanisms in Drosophila Embryogenesis.
256E. Current Topics in Prokaryotic Development.
256G. Nucleic Acid Structure Determination by NMR.
256H. Basic Mechanisms of Promoter Activation.
256J. Contractile Proteins in Muscle Contraction and Cell Motility.
256K. Biochemistry and Molecular Biology of Chlamydomonas.
256L. Literature of Structural Biology.
256M. Mechanism and Regulation of Transcription Termination in Eukaryotic Organisms.
256N. Advanced Topics in Structural Biology.
256O. Membrane Biophysics.
256P. Analysis of Protein Structure.
256Q. Biochemistry and Function of Ubiquitine in Yeast and Higher Eukaryotes.
256R. Biomolecular Nuclear Magnetic Resonance Spectroscopy and Protein Structure.

256S. Proteome Bioinformatics.

256T. RNA Processing and RNA Genomics.

256U. Mitochondrial Biogenesis and Link to Disease.

256V. Proteomics and Mass Spectrometry.

256W. Cytoskeletal Dynamics during Drosophila Oogenesis.

256X. Microtubule-Based Structures and Human Disease.

257. Physical Chemistry of Biological Macromolecules. (4) Lecture, one hour; discussion, one hour; laboratory, four hours. Concurrently scheduled with course 153A. Theory of hydrodynamic, thermodynamic, and optical techniques used to study structure and function of biological macromolecules. S/U or letter grading.

258. Advanced Topics in Biochemistry and Molecular 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 repeated for credit. S/U or letter grading.


C259B. Mechanisms in Regulation of Transcription II. (2) Second five weeks. Lecture, four hours. Eukaryotic general transcriptional apparatus; sequence-specific promoter recognition; mechanisms of transcriptional activation and inhibition. Metabolic regulation of activities. Control of chromatin 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 CM221, and Human Genetics M260A.) Lecture, four hours; discussion, two hours. Recommended requisites: Biostatistics 100A or 110A or Mathematics 170A or Statistics 100A, and Computer Science 32 or Program in Computing 10C with grade of C– or better. Prior knowledge of biology not required. Designed for engineering students as well as students from biological sciences and medical school. Introduction to bioinformatics and methodologies, with emphasis on concepts and applications of new computational and statistical techniques to analyze biological data. Focus on sequence analysis and alignment algorithms. Concurrently scheduled with course CM160A. S/U or letter grading.

CM260B. Algorithms in Bioinformatics and Systems Biology. (4) (Formerly numbered C260BL.) (Same as Bioinformatics M260B and Computer Science CM222.) Lecture, four hours; discussion, two hours. Recommended requisites: Biostatistics 100A or 110A or Mathematics 170A or Statistics 100A, and Computer Science 32 or Program in Computing 10C with grade of C– or better. Course CM260B is not required knowledge for engineers interested as well as students from biological sciences and medical school. Development and application of computational approaches to biological questions, with a focus on interdisciplinary problems as computational problems and then solving these problems using algorithmic techniques. Computational techniques include those from statistics and computer science. Concurrently scheduled with course CM160B. Letter grading.

260L. Advanced Bioinformatics Computational Laboratory. (2) Laboratory, four hours. Enforced requisites: course CM260A. Corequisite: course CM260B. Development and application of computational approaches to ask and answer biological questions by implementing various of 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. Development of conceptual understanding of implementation and performance. Foundation for how to do innovative work in these fields. Experience in observing impact of computational complexity of algorithms in computing solutions. S/U or letter grading.

C261A. Plant Biochemistry. (4) Lecture, three hours; discussion, two hours. Requisites: course 153C. Introduction 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 Protein Translocation Systems. (3) Lecture, two hours; discussion, two hours. Requisites: courses 269A through 269D. Protein translocation into nucleus, mitochondrion, peroxisome, chloroplast, endoplasmic reticulum, and protein export in bacteria. Letter grading.

M263. Metabolism and Its Regulation. (4) (Same as Biological Chemistry M263.) Lecture, three hours. Requisites: course 110A, and one course from 153B, 153C, or 156; or Biological Chemistry 201A and 201B; or General Chemistry 141A and 141B; or General Biochemistry 151A and 151B; or Microbiology 154, Life Sciences 3 and 23L, or course 153L. Recommended: courses 153C, 154, Life Sciences 4. Light harvesting, photosynthesis, carbohydrate metabolism, pigment synthesis in chloroplasts and bacteria. Assembly of photosynthetic membranes and regulation of genes encoding those components. Emphasis on understanding of experimental approaches. Concurrently scheduled with course CM170. S/U or letter grading.

271. Advanced Topics in Inorganic Chemistry. (2 to 4) Lecture, two to four hours. Each offering encompasses one recognized specialty in inorganic chemistry, generally taught by faculty members whose research interests embrace that specialty. S/U or letter grading.

272A-272Z. Seminars: Research in Inorganic Chemistry. (2 each) Seminar, three hours. Advanced study and analysis of current topics in inorganic chemistry. Discussion of current research and literature in research specialty of faculty member teaching course. S/U or grading.

272A. Chemistry of Materials.


272C. Inorganic Spectroscopy.

272D. Bioinorganic Chemistry and Biology of Transition Metals and Oxygen.

272E. Organometallic Synthesis and Chemical Vapor Deposition.

272G. Issues in Chemical Education.

272L. Organometallic Chemistry.

272R. Reticular Chemistry.


272T. Inorganic and Metalorganic Laboratory Methods. (8) 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; Schlenck techniques; chromatographic and ion exchange methods; spectroscopic characterization and literature applications. Concurrently scheduled with course C174. S/U or letter grading.

273T. Inorganic Reaction Mechanisms. (4) Lecture, three hours. Requisites: courses 110A, 110B, 113A, and 172, with grades of C– or better. Survey of inorganic reactions; mechanistic principles; electronic structure of metal ions; transition-metal coordination chemistry; inner- and outer-sphere and chelate complexes; substitution, isomerization, and racemization reactions; stereochemistry; symmetry; energy transfer, free/radical, polymerization, and photochemical reactions of inorganic species. May be concurrently scheduled with course C175. S/U or letter grading.

C275A. Group Theory and Applications to Inorganic Chemistry. (4) Lecture, two 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 C176E. S/U or letter grading.

276B. Physical Methods in Inorganic Chemistry. (4) Lecture, three hours. Requisite: course C276A. Theory and applications of spectroscopic techniques, including magnetic resonance and vibrational and surface sensitive methods, of inorganic compounds and materials. S/U or letter grading.

277. Crystal Structure Analysis. (4) 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, Fourier analysis, heavy atom techniques, direct methods, isomorphous replacement, crystallographic refinement, error analysis, and common pitfalls. S/U or letter grading.

278. Inorganic 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 or letter grading.

279. Biological Inorganic Chemistry. (4) Lecture, three hours. Requisites: courses 153A (or 153AH), 171. Role of bioinorganic chemistry in the processes of life. Topics include interactions of metal ions with proteins, nucleic acids, and other biological molecules; mechanisms of metal ion transport and storage; introduction to metalloenzymes; metal transport, electron transfer, respiration, and photosynthesis; metals in medicine. Concurrently scheduled with course C179. S/U or letter grading.


281. Polymer Chemistry. (4) Lecture, three hours; discussion, one hour. Requisites: courses 308B, 110A. Synthesis of organic and inorganic macromolecules, thermodynamic and statistical mechanical descriptions of unique properties of polymers, polymer characterization methods, and special topics such as conductive and biomedical polymers and polymeric reagents in synthesis. Concurrently scheduled with course C181. S/U or letter grading.

282. Introduction to Inorganic Chemistry Research. (2) Lecture, 90 minutes. Discussion of current research in inorganic chemistry, designed primarily as an introduction for entering graduate inorganic chemistry students. S/U 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 with field experience. Classroom management, lesson design, assessment, history of science education. S/U or letter grading.

M370B. Integrated Science Instruction Methods. (4) Same as Earth 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.

575. Teaching Apprentice Practicum. (1 to 4) Seminar, to be arranged. Preparation: apprentice personnel employment as teaching assistant, associate, or fellow. Teaching apprenticeship under active guidance and supervision of regular faculty member responsible for curriculum and instruction at UCLA. May be repeated for credit. S/U grading.

400. Safety in Chemical and Biochemical Research. (2) Lecture, two hours. Survey of safe laboratory practices for experiments in organic, inorganic, and physical chemistry and biochemistry. Topics include laser safety, cryogenic hazards, high and low-pressure experimentation, gas and carriern gas handling, chemical spills, fire extinguishing, and chemical disposal. S/U grading.

495. Teaching College Chemistry. (2) Seminar, two hours; discussion, two hours; 20 hours training during week prior to Fall Quarter. Course for teaching assistants to deal with problems and techniques of teaching college chemistry. S/U grading.

596. Directed Individual Study or Research. (2 to 16) Tutorial, to be arranged with faculty member who directs study or research. May be repeated for credit. S/U or letter grading.

597. Preparation for M.S. Comprehensive Examination or Ph.D. Qualifying Examinations. (2 to 4) Tutorial, to be arranged. May be taken for maximum of 8 units. S/U grading.

598. Research for and Preparation of M.S. Thesis. (2 to 16) Tutorial, to be arranged. Each faculty member supervises research of M.S. students and holds research group meetings, seminars, and discussions with students. May be repeated for credit. S/U or letter grading.

599. Research for and Preparation of Ph.D. Dissertation. (2 to 16) Tutorial, to be arranged. Each faculty member supervises research of Ph.D. students and holds research group meetings, seminars, and discussions with students. May be repeated for credit. S/U or letter grading.

CÉSAR E. CHÁVEZ DEPARTMENT OF CHICANA AND CHICANO STUDIES

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Leisy J. Abrego, 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 Latina/Latino and indigenous populations in the Americas. Addressing local, national, and transnational contexts, the Chicana/Chicano studies curriculum at UCLA explores race, class, gender, and sexuality paradigms as they have shaped the history of the field, as well as new directions in the study of 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

The Chicana and Chicano Studies Department offers a designated capstone program for undergraduate majors. Students have options for completing a senior honors thesis, individual research, or senior project under the direction of a faculty mentor. Alternatively, students may elect to complete an upper division course that includes additional coursework culminating in completion of a capstone paper or creative project. Through their capstone work, students are expected to demonstrate working knowledge of the major findings and methods of the disciplines from which they have drawn their Chicana and Chicano studies coursework, show their capacities for conceiving and executing a research or creative project on a self-selected topic as well as identifying and evaluating relevant documentation pertaining to that project, demonstrate appro-
Chicana and Chicano Studies B.A.

Capstone Program

The B.A. program in Chicana and Chicano Studies is committed to the practice of different forms of scholarship and pedagogy and to the promotion of critical thinking about such issues as gender, sexuality, social action, language, race, ethnicity, class, assimilation/acculturation paradigms, and indigenous traditions. The literary and visual arts often function as vehicles for social change and creative empowerment, and so they constitute one focus of the curriculum, that aims to strike a balance among the social sciences, humanities, arts, and the professions. The major prepares students for graduate education in academic and professional fields and for a variety of positions that involve community and social service in the U.S. and abroad.

Preparation for the Major

Required: Chicana and Chicano Studies 10A, 10B, Spanish 5 or equivalent.

Transfer Students

Transfer applicants to the Chicana and Chicano Studies major with 90 or more units must complete as many of the following introductory courses as possible prior to admission to UCLA: one interdisciplinary Chicana/Chicano history and culture course, one interdisciplinary Chicana/Chicano social structure and contemporary conditions course, and five quarter terms of Spanish.

Refer to the UCLA Transfer Admission Guide 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 11 upper division courses, including Chicana and Chicano Studies 101; one service learning course from 100SL or M170SL or from the approved list available in the department office each term; two related study courses from the approved list of courses outside the department (related study includes courses that provide a comparative perspective to Chicana and Chicano studies and/or a contextualization of 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 CM110, 120, M124, M125, M126, 132, 143, M144, CM147, 151, 152, 153, M154, 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 in writing by the department chair.

Each major course must be taken for a letter grade, and students must have an overall grade-point average of 2.0 or better.

Honor 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, 10C, 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 advisor 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).

A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor.

Each minor course must be taken for a letter grade, and students must have an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website, http://grad.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 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 indigenousness, 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 Chicana/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/Chicana and Chicano Studies.

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Chicana studies. Culminating project may be required. May not be applied toward departmental major or minor. May be taken twice for credit with topic change. P/NP or letter grading.

197. 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 to be announced. May be repeated for credit. P/NP or letter grading.

198. 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 and change. May be repeated for credit with topic change. P/NP or 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 disen-tangling effects of race, gender, class, and immigrant status on Chicana/Chicano educational attainment and achievement. Examination of how historical, social, political, economic, and cultural forces have shaped 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 beginning in legends and myths of ancient Mexican, South American, and Central American or-gin. Representation of Chicana/Chicano literature and Chicano/Latino culture. Topics include colonial history, immigration, revolution, race, class, gender, sexuality, and dignity. Open to students who have completed English Composition 3 or 3H. P/NP or letter grading.

M103D. Introduction to Latina/Latino Literature. (5) Same as English M105D.) Lecture, four hours; discussion, one hour (when scheduled). Requisite: English Composition 3 or 3H. Survey of U.S. Latina/Latina/Latino literature and its major critical currents and debates in Chicana/Chicana and Chicano/Latina/Latino literary and cultural production. P/NP or letter grading.

M105B. Chicana/Chicana Literature from Mexican Revolution to El Movimiento, 1920 to 1970s. (5) (Formerly numbered M105B.) (Same as English M105C.) Lecture, four hours; discussion, one hour (when scheduled). Requisite: English Composition 3 or 3H. Survey of Chicana/Chicana literature from 1920s through Great Depression and World War II, expansion of civil rights movement. Oral and written narratives by writers including Conrado Esparza, Jovita González, Celestas Jaramillo, Angelico Suárez, Osó Aquasto, and Evangelina Vegil. P/NP or letter grading.

M105C. Chicana/Chicana Literature since El Movimiento, 1970s to Present. (5) (Formerly numbered M105B.) (Same as English M105C.) Lecture, four hours; discussion, one hour (when scheduled). 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 Chicano and immigrant migration have shaped 21st-century chicanidad. Oral, written, and graphic fiction, poetry, and drama by writers including John Rechy, Gloria Anzaldúa, Los Bros Hernández, Ana Castillo, and Dogado Gilbert guide exploration of queer and feminist studies, Reagan generation, immigration debates, and emerging Latina/Latina majorities. P/NP or letter grading.

M103D. Introduction to Latina/Latino Literature. (5) Same as English M105D.) Lecture, four hours; discussion, one hour (when scheduled). Requisite: English Composition 3 or 3H. Study of U.S. Latina/Latina/Latino literature and its major critical currents and debates in Chicana/Chicana and Chicano/Latina/Latino literary and cultural production. P/NP or letter grading.

M105F. Gender, Fiction, and Social Change. (4) (Formerly numbered M105C.) Lecture, four hours. Requisite: English Composition 3 or 3H. Examination of recent Chicano/chicana novels in four Hollywood genres — silent “greaser” films, social problem films, Westerns, and gang films — that are major genres that account for films about the Mexican American experience from 1930s and 1980. Examination of recent Chicano-produced films that subvert or signify on these Hollywood genres, including Zoot Suit, Ballad of Gregorio Cortez, and Born in East L.A. Consideration of shorter, more experimental work that critiques Hollywood image of Chicano. Guest speakers include both pioneer and up-and-coming filmmakers. P/NP or letter grading.

M115. Musical Aesthetics in Los Angeles. (4) (Same as Ethnomusicology M115.) Lecture, three hours. (Formerly numbered M117.) Lecture, five hours. General view of musical, cultural, and social thought as well as intellectual traditions in America. Roles of writers as intellectuals and cultural/political strategists, and as definers of (national) identity, social reality, and understandings of liberation. Letter grading.

spanning more than 100 years, Mexican cinema has been plagued by use of stereotypes that limit cinematic discourse portrayal of Chicanas/Chicanos. Exploration of causes for such obtuse cinematic representation. P/NP or letter grading.

M118. Student-Initiated Retention and Outreach Issues in Higher Education. (4) (Same as Afro-American Studies M118, American Indian Studies M118, Asian American 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. Enforced requisite: UCLA as a case. May be repeated twice for credit. Letter grading.

M119. Chicano/Latino Community Formation: Critical Perspectives and Oral Histories. (4) (Formerly numbered 119.) (Same as Labor and Workplace Studies M119.) Lecture, four hours. Foundations of historical formation and development of Chicano/Latino communities in 20th century, with focus on labor, immigration, economic structures, electoral politics, and international development. Letter grading.

M120. Immigration and Chicano Community. (4) Lecture, three hours. Discussion on relationship between international immigration and development of Chicano/Latino community. Examination of U.S. immigration policy and relationship between Mexican-origin population and other Latin American immigrants. P/NP or letter grading.

M121. Issues in Latina/Latino Poverty. (4) (Same as Labor and Workplace Studies M121 and Urban Planning M140.) Lecture, four hours. Examination of nature and extent of urban and rural poverty confronting Latina/Latino population in U.S. Special emphasis on anti-poverty policies of government and nonprofit organizations and social planning and economic development strategies. Attention also to literature on underclass. Letter grading.


M124. Latino Immigration History and Politics. (4) (Same as Honors Collegium M143.) 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.

M125. U.S./Mexico Relations. (4) (Formerly numbered 125.) (Same as Labor and Workplace 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.

M126. Politics of Crisis: Migration, Identity, and Religion. (4) (Same as Honors Collegium M145.) Lecture, three hours. Examination of individual and collective religious response of Latin Americans and Latinas/Latinos in U.S. to dislocations, displacements, and forces brought about by conquest, occupation, underdevelopment, globalization, and migration. Letter grading.


M128. Race, Gender, and U.S. Labor. (4) (Same as Labor and Workplace 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 equity pursued through organized labor and other means. Letter grading.


M130. Worker Center Movement: Next Wave Organizing for Immigrant Workers. (4) (Same as Afro-American Studies M167, Asian American Studies M166C, and Labor and Workplace Studies M165S.) Seminar, three hours. Development of theoretical and practical understanding of worker center movement, with focus on historical factors that have led to formation and growth of worker centers. Role of worker centers in promoting multiracial and multi-racial campaigns for workplace and economic justice. Transnational cross-border solidarity issues and rights of undocumented worker letter grading.

131. Barrio Popular Culture. (4) Lecture, four hours. Construction of model by which to organize study of Chicano/Chicana popular culture by focusing on barrio as metaphor for community. Examination of beliefs, myths, and values of Chicanas/Chicanos culture and representations in icons, heroes, legends, stereotypes, and popular art forms through literature, film, video, music, mass media, and oral history. Letter grading.


M134. Women’s Movement in Latin America. (4) (Same as Gender Studies CM134.) Lecture, four hours. Historical examination of diversity of women’s movements in Latin America, focusing on their Latin American counterparts in English and Spanish, with particular focus on how each group deals with gender, ethnic, and class issues. Concurrently scheduled with course C251. Letter grading.

142. Mesoamerican Literatures. (4) Lecture, four hours. Preparation: required knowledge of Spanish (level 4). Survey of pan history of Mesoamerican literatures, including myths, lyrics, poetry, religious celebrations, rituals, and drama, specifically of Aztec and Mayan peoples prior to European contact. Letter grading.

143. Mestizaje: History of Diverse Racial/Cultural Roots of Mexico. (4) Lecture, four hours. Historical examination of diversity of diverse racial and cultural roots of Chicanas and Chicanos. Utilizing theoretical frameworks of mestizaje, Aztlán, indigenismo, La Raza Cósmica, and la tercera raíz, examination of some important groups who have contributed to formation of Mexican national culture. Development of race relations in Mexico during colonial period, with focus on analysis of Nahuals (Aztecs), Mixtecs, Spaniards, and African slave population. Analysis of immigrant experience to Mexico and California during national period, specifically examination of migration and adaptation experiences of Chinese, Japanese, and Punjabi-Indian immigrants. P/NP or letter grading.

M144. Women’s Movement in Latin America. (4) (Same as Gender Studies M144 and Labor and Workplace Studies M144.) Lecture, four hours. Course on women’s movements and feminism in Latin America and Caribbean region. Examination of 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 indigenous movements, environmental struggles, labor movements, Christian-based communities, peasant and rural organizing, and new social movements that are concerned with race, sexuality, feminism, and human rights. Through comparative study of women’s movements in diversity of political systems as well as national and transnational arenas, students gain understanding of historical 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 Chicana Literature: Literature to 1960. (4) (Same as American Literature M145A.) Lecture, three hours. Requisite: Spanish 25 or 27. Introduction to texts representative of Chicana literary heritage. Sampling of genres, as well as historical and geographical settings and points of view characteristic of work written by Chicanas during 20th century. Most required reading in Spanish. English and English works are included and discussed. Reading and analysis of number of primary texts and critical statements pertaining to characteristics and development of Chicana literary corpus. Letter grading.

M145B. Literature of Chicana/Chicano Movement. (4) (Same as Spanish M155B.) Lecture, three hours. Enforced requisite: Spanish 25 or 27. Examination of literature of Chicana/Chicano movement covering period from first manifestations of Chicano artistic production in 1965 with el Teatro Campesino through rise
of women’s writing, including work by Cherré Moraga (1983), Herrera Miravent (1985), and Sandra Cisneros (1982). The course, 146. Chicano Narrative, explores the cultural and historical experiences of Chicanos and Chicanas in the United States, with a particular focus on the Chicana/o movement and the development of Chicano/a literature.


155. Latinos in U.S. (4) Same as Sociology M155. Lecture, three hours; discussion, one hour. Designed for juniors/seniors. Exploration of the context of immigration and human rights movement, with particular attention to the 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 such as Native Americans. P/NP or letter grading.

156A. Immigration Rights, Labor, and Higher Education. (4) Same as Asian American Studies M166A and Labor and Workplace Studies M166A. Lecture, three hours. 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 immigrant students in higher education, challenges facing undocumented students, and the 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 experiences, and work to collectively develop student publication on immigrant students in higher education. P/NP or letter grading.

156B. Research on Immigration Rights, Labor, and Higher Education. Lecture, four hours. Review of history and social movement, together with background information on Latino immigrants and their experiences in the United States. P/NP or letter grading.


158. Chicana Historiography. (4) Same as Gender Studies M157 and History M151D. Lecture, four hours. Examination of Chicana/o historiography, looking closely at how Chicana/o historians have placed Chicanas into particular narratives. Using Chi- cana feminist approaches to study of history, revisit- ing of specific historical periods and moments such as Spanish Conquest, Mexican Independence, and Chicanismo, to excavate untold stories about women’s participation in and contribution to making of Chicanas and Chicanos. P/NP or letter grading.

159A. History of Chicano Peoples. (4) Same as History M151A. Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Survey lecture course on historical development of Mexican (Chicana/o) community and political and cultural life of Mexican immigrants to the U.S. through the 17th, 18th, and 19th centuries, with special focus on labor and politics. Provides integrated understanding of longer temporal time in Mexican community inquiry into major formative historical forces affecting commu- nity. Social structure, economy, labor, culture, po- litical organization, conflict, and international rela- tions. Emphasis on social analysis, social, economic, and labor conflict, ideas, domination, and resistance. Developments related to historical events of significance occurring both in U.S. and Mexico. Lectures, special presentations, readings, assignments, written examinations, library and field re- search, and submission of paper. P/NP or letter grading.

159B. History of Chicano Peoples. (4) Same as History M151B. Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Survey lecture course on historical development of Mexican (Chicana/o) community and political and cultural life of Mexican immigrants to the U.S. through the 17th, 18th, and 19th centuries, with special focus on labor and politics. Provides integrated understand- ing of change over time in Mexican community inquiry into major formative historical and policy issues affecting community. Within framework of domi- nation and resistance, discussion deals with social structure, economy, labor, culture, political organization, conflict, and ideology. Developments related to historical events of significance occurring both in U.S. and Mexico. Lectures, special presentations, readings, assignments, written examinations, library and/or field research, and submission of paper. P/NP or letter grading.

160. Introduction to Chicana/Chicana Speech in American Society. (4) Lecture, three hours. Survey course presenting (1) basic elements of Chicana/o language use, including history of Chicana/o languages, types and social functions of Chicano speech (pachuco, co, Spanglish), sexist language, and multilingualism and monolingualism and (2) major social is- sues associated with language use by Chicanos and other urban ethnic populations. Letter grading.


164SL. Oral History: Latino New Immigrant Youths. (4) Same as Applied Language M164SL. Seminar, three hours; tutoring, two and one-half hours. Theory, methodology, and practice of oral his- tory, together with background information on Latino immigration to U.S. Reading list include oral histories of Latino immigrants. Letter grading.

165. Language in Education. (4) Lecture, three hours. Examination of language use pertinent to educational systems, including language inequity, lit- eracy, testing, and socialization, as well as institutional ideologies. Letter grading.

166. Paulo Freire for Chicas/Chicas. (4) Seminar, four hours. Introduction to pedagogy of Paulo Freire and examination of historical and con- temporary problems confronting Chichina- no education. Central focus to offer Freirian alterna-
168A. Latinos: Print Media. (4) Lecture, four hours. Examination of systemic (mis)representations of Latinos by print media source (Los Angeles Times) by means of critical discourse analysis and metaphor theory. Focus on ideological basis for theories of racism in language in this context. Student projects range from immigration to education and crime to culture. Letter grading.

168B. Latinos: Television News. (4) Lecture, four hours. Requisites: course 168A. Study of multicultural (visual, graphic, spoken, audio, and text) images disseminated by television news programs to learn how nation comes to their understanding of Latinos. Development of critical visual interpretative acuity through semiotics training and analysis of actual television news stories. Letter grading.

169. Representations of Indigenous Peoples in America. (4,4) Lecture, four hours. Strongly recommended for course 101. Introduction to different forms of representation of indigenous peoples and their presence in America, with emphasis on Mesoamerica and Andes. How indigenous images and expressions are persistent as constructed at points of contact with Europeans during development of indigenismo and in current period. Discussion of how these relate to Chicana/Chicano identity construction. Letter grading.

M170SL. Latinos, Linguistics, and Literacy. (5) (Same as Applied Linguistics M172SL, Honors College M128SL, and Spanish M172SL) Seminar, four hours; field project, four to six hours. Recommended requisite: Spanish 100A. In-depth study of various topics related to literacy, including different definitions of literacy, programs for adult preliterates, literacy and gender, and language policy in the home (whole language, phonics, Freire’s liberation pedagogy), history of writing systems, phoneme as basis for alphabetic writing, and national literacy campaigns. Required field project involving working with adults in adult literacy programs. 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 weapon used against Latinos and immigrants. With rise of Latinos in last decade, there has been increase of various guises of anti-Latino hegemonic humor in commercial mass media popular culture. Exploration of theorizing, as well as today’s myriad examples, of such humor to develop critical literacy of social text work it accomplishes. Letter grading.

172. Chicana and Chicano Art and Artists. (4) Formerly numbered M172X) Lecture, four hours. Culture change theory encompasses such issues as innovation, syncretism, colonialism, modernization, urbanization, migration, and acculturation. Examination of methods anthropologists/ethnographers use in studying and analyzing culture change within ethnocultural background of Mexican and Mexican American people to clarify social and cultural origins of modern habits and customs and, more importantly, unravel cultural change threads of that experience. Topics include technology and evolution, Indian nationalism, mestizaje, expansion, industrialization, immigration, ethnicity, and adaptation. Field project on some aspect of culture change required. P/NP or letter grading.

M173. Nonviolence and Social Movements. (4) (Same as Sociology M174 and Latino and Workplace Studies M173.) Lecture, three 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 the Americas. Examination of political and occupational lessons of nonviolent movements as they impact social change organizing in Los Angeles. P/NP or letter grading.

M174A-M174B. Restoring Civility: Understanding, Using, and Resolving Conflict. (4-4) (Same as Education M145C and History M145D.) Lecture, four hours; discussion, three hours. Course M174A is required for M174B. 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 (M174A) and Letter (M174B) grading.

M174C. Alternatives to Violence: Peer Mediation in Public Schools. (4) (Same as Education M145C.) 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 express its significance to historical construction of race class in American history. Concurrently scheduled with course C256. Letter grading.

M183. History of Los Angeles. (4) (Same as History M174B.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Social, economic, cultural, and political development of Los Angeles and its environs from time of its founding to today. Emphasis on diverse peoples of area, changing physical environment, various interpretations of city, and Los Angeles’ place among American urban centers. P/NP or letter grading.


M185. Whose Monument Where: Course on Public Art. (4) (Same as Art M185 and World Arts and Cultures M125A.) Lecture, four hours. Introduction to Chicana art and artists. Examination of Chicana aesthetic. Chicana artists have developed unique experience and identity as artists and Chicana. Letter grading.

176. Globalization and Transnationalism: Local Histories and Global Praxis. (4) Lecture, four hours. Analysis of dynamics of Chicana/Chicano transnationalism inside and outside the local community (whole language, phonics, Freire’s liberation pedagogy), history of writing systems, phoneme as basis for alphabetic writing, and national literacy campaigns. Required field project involving working with adults in adult literacy programs. 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 assessment and critical analysis of social policy issues affecting them. Survey of social, economic, cultural, and political circumstances affecting ability of Latinos to access public benefits and human services. Letter grading.

M184 and World Arts and Cultures M128.) Lecture, four hours. Introduction to Chicana art and artists. Examination of Chicana aesthetic. Chicana artists have developed unique experience and identity as artists and Chicana. Letter grading.


M179. Language Politics and Policies in U.S.: Comparative History. (4) Formerly numbered 179.) (Same as Applied Linguistics M179.) Lecture, four hours. Historical survey of language policies and language groups in U.S. as context to understanding social, legal, and political constraints on bilingualism. Review of federal, state, and institutional language policies and politics, with focus on schooling, administration of government, justice, and workplace. P/NP or letter grading.


CM182. Understanding Whiteness in American History and Culture. (4) (Formerly numbered 182.) Lecture and some discussions, 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 express its significance to historical construction of race class in American history. Concurrently scheduled with course C256. Letter grading.

M186A. Beyond Mexican Mural: Beginning Muralsim and Community Development. (4) (Same as Art M186A and World Arts and Cultures M125A.) Lecture/ studio/lecture, four hours. Corequisite: course M186B. Letter grading.

M186B. Beyond Mexican Mural: Intermediate Muralism and Community Development. (4) (Same as Art M186B and World Arts and Cultures M125B.) Studio/lecture, four hours. Corequisite: course M186B. Letter grading.

M186AL-M186BL-M186CL. Beyond Mexican Mural: Muralism and Community Laboratory. (4-4-2) (Same as Art M186AL-M186BL-M186CL and World Arts and Cultures M125AL-M125BL-M125CL) Course M186AL is requisite to M186BL, which is requisite to M186CL. 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, 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. Corequisite: course M186A, M186BL. Intermediate. Laboratory, four hours. Requisites: courses M186A, M186BL. Corequisite: course M186C. Laboratory, two hours. Corequisite: course M186C.

M186B. Beyond Mexican Mural: Intermediate Muralism and Community Development. (4) (Same as Art M186B and World Arts and Cultures M125B.) Studio/lecture, four hours. Requisites: courses M186A, M186BL. Corequisite: course M186B. Continuation of investigation of muralism as method of community formation and development. Exploration of issues through development of large-scale collaborative digitally created image and/or painting for placement in community. Students research, design, and work with community participants. P/NP or letter grading.
M186C. Beyond Mexican Mural: Advanced Muralism and Community Development. (4) Same as Art M128C. Study of critical issues in large-scale collaborative digitally created image and/or painting for community development. First quarter, lecture, six hours. Requisite: courses M186B, M188B. Corequisite: course M186CL. Exploration of investigation of muralism as method of community education, development, and empowerment. Exploration of issues through development of large-scale collaborative digitally created image and/or painting for community development. Students research, design, and implement projects. Consultation of project through installation, documentation, and dedication, with work on more advanced independent projects. P/NP or letter grading.


188. Special Courses in Chicana and Chicano Studies. (4) Seminar, three hours. Some sections may require course work. Departmentally sponsored exploratory courses, such as those taught by visiting faculty members. May be repeated for credit. P/NP or letter grading.

190. Research Colloquia in Chicana and Chicano Studies. (2) Seminar, two hours. Designed to bring together students undertaking supervised research in Chicana and Chicano Studies. Seminar in seminar setting with one or more faculty members to present reports, discuss research methodologies, 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. P/NP or letter grading.

191. Variable Topics Research Seminars: Chicana and Chicano Studies. (4) Seminar, three hours. Limited to juniors/seniors. Research seminar organized around readings and engaged discussion of critical topics of interest in field. Exploration of issue, theoretical implications for field, and practical implications for communities. Final research project required. May be repeated for credit. P/NP or letter grading.

192A. Undergraduate Practicum in Chicana and Chicano Studies (formerly numbered 192.) Seminar, four hours. Limited to juniors/seniors. Training and supervised practicum for undergraduate students who wish to gain experience working with Chicana and Chicano community anddominant society and how these intersections of Chicana/Latino culture and identity and technologies cross national borders with growing migration of other Latinas/Latinos. May be repeated for credit. Letter grading.

192B. Undergraduate Practicum in Chicana and Chicano Studies (formerly numbered 192.) Seminar, four hours. Limited to juniors/seniors. Supervised eleven-week supervised practicum for undergraduate students who do not identify as Chicana/Latino or Chicano but whose practices also shape Chicana/Latino culture and identity. May be repeated for credit. P/NP or letter grading.

193. Readings/Speaker Series Seminars: Chicana and Chicano Studies. (1) Seminar, one hour. Limited to undergraduate Colloquia Seminar students. Reading of journal articles associated with topic to be discussed in meetings. P/NP or letter grading.

196. Research Apprenticeship in Chicana and Chicano Studies. (2 to 4) Tutorial, three hours per week. Requisite: course 10A or 10B. Limited to juniors/seniors. Entry-level research apprenticeship for upper division students under guidance of faculty mentor. Participation in all aspects of research project, including library research, reading materials, and compilation of data, with scheduled meetings throughout term with faculty mentor for discussion of project. May not be applied toward departmental major or minor requirements. May be repeated under different contract; consult department. Individual contract required. P/NP or letter grading.

197. Individual Studies in Chicana and Chicano Studies. (2 to 4) Tutorial, four hours. Requisites: courses 10A, 10B. Limited to juniors/seniors. Individual intensive study, with scheduled meetings to be arranged between faculty mentor 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-198C. Honors Research in Chicana and Chicano Studies. (2 each) Tutorial, one hour. Limited to junior/senior honors program students. May be repeated for credit. Individual contract required. Letter grading. 198A. Thesis Conceptualization. Requisites: courses 10A, 10B, 101, and 89 or 198. Conceptualization and formulation of project in Fall Quarter under direct supervision of faculty member. Preliminary data collection on topic and production of proposal for thesis required. 198B. Annotated Bibliography/Literature Review. Requisite: course 198A. Development of research skills in Winter Quarter to produce extensive annotated bibliography or literature review on thesis topic. Weekly meetings with faculty member to discuss research and development of outline, argument, and structure of thesis. 198C. Writing and Revision. Requisite: course 198B. Writing, revision, and completion of departmental honors thesis in Spring Quarter under direct supervision of committee. P/NP or letter grading.

199. Directed Research or Senior Project in Chicana and Chicano Studies. (2 to 4) Tutorial, two hours. Limited to juniors/seniors. Supervised individual research or investigation under guidance of faculty mentor. Culminating paper or project required. May be repeated for credit. Individual contract required. P/NP or letter grading.

Graduate Courses

200. Latina/Latino Los Angeles: Survey of Interdisciplinary Methods. (4) Seminar, three hours. Introduc- tion to multiple analytical approaches for studying Los Angeles as global city where nations, languages, cultures, and histories intersect and create new third space. As such, Los Angeles provides critical site of social, political, aesthetic, cultural, and professional inquiry in field. Topics include: popular culture, urban history, language, labor, migration, citizenship, and politics. Research methods include semiotic, critical discourse analysis, spatial analysis, policy analysis, and multiple forms of qualitative research. Service Learning: S/U or letter grading.

201. New Directions in Chicana and Chicano Studies. (4) Seminar, four hours. Limited to graduate students. Individual contract required. Students will explore important theoretical frameworks in field of Chicana and Chicano studies. Exploration of changes that have taken place around four key theoretical areas: coloniality, nationalism, inequality studies, and genders and sexualities. S/U or letter grading.

209. Service Learning: Theory and Praxis. (4) Seminar, three hours. Limited to graduate students. Examination of approaches and theories that underpin service learning and exploration of ways in which service learning can be utilized in variety of academic disciplines (second and foreign language instruction, education, ethnic studies, labor studies, women's studies, health, science, etc.). Creation of research proposal for use of service learning in one course (real or hypothetical) in academic discipline of student's choice. S/U or letter grading.

210. Queer of Color Genealogies. (4) Seminar, three hours. Art of community-making by those multiply marginalized by categories of race, gender, class, citizenship, and gender nonconformity and disposed of normative forms of belonging. Tracking of genealogies of queer of color communities through alternative archives of desire, love, affect, memory, performance, and politics. Reading about queer of color theories and normative purposes, with special focus on digital storytelling, and forms of social documentation methodologies. S/U or letter grading.


212. Latina/Latino History in U.S. (4) Lecture, four hours. Study of how intersections of race, class, and gender shape experiences of Latina/Latino families in U.S. society and how these intersections also help shape individual experiences within families. Examination of family, race, class, and gender as sociological concepts. Readings about family experiences of diverse Latina/Latino groups in U.S., with special emphasis on immigrants, and analysis of how race, class, and gender together play important roles in shaping these experiences. Discussion of roles of structure and space for agency in each context. Concurrently scheduled with comprehensive examination CM213. Asian-Latinos. (4) Same as Asian American Studies M213.) Seminar, three hours. Limited to graduate students. Examination of historical and contemporaneous populations of Asian-Latinos in Latin America and U.S. Review and critique of literature on Asian-Latinos and analysis of experience of Asian-Latinos utilizing theoretical frameworks of mestizaje, critical mixed-race theory, and transnationalism. Coverage of often-overlooked Asian contributions to Latin American and Chicano/Latino culture and identity and exploration of unique experience of mixed-race Asian-Latinos. S/U or letter grading.

214. Chicana Feminism. (4) Same as Gender Studies CM232A) Lecture, four hours. Enforced requis- ite: course 10A or Gender Studies 10. Examination of theories and practices of women who identify as Chicana feminist. Analysis of Chicana feminism as founded by those who do not identify as feminist but whose practices attend to gender inequities faced by Chicanas both within Chicana/Chicano community and dominant so- ciety. Attention to Anglo-Eastern and Third World women. Concurrently scheduled with course CM110. S/U or letter grading.

215. Transnational Women’s Organizing in America. (4) Lecture, four hours. Feminist theories of transnational organizing. Examination of how questions of race and gender as central to processes of globalization and essential to economic and political struggles encompassed in transnational power relations. Exploration of how questions of race and gender influence global economic policies and 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 glo-
balization has been linked to feminization of labor and migration, 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. Concurrently scheduled with course CM417. Letter grading.

CM230. Chicana Lesbian Literature. (4) Same as Gender Studies CM230.) Lecture, three hours. Explo-
ration of intersection of radical First and Third World feminist politics, lesbian sexuality and its relationship to Chicana identity, representation of lesbianism in Chicana literature, meaning of familia in Chicana les-

232. Aesthetics of Place in Chicana/Chicano Ex-
pressive Culture. (4) Seminar, three hours. Examina-
tion of several place-based aesthetic traditions, in-
cluding indigenous, Santería, diasporic, and Aztlán aesthetics, in Chicana/Chicana visual art, film, perfor-
mance, and literature. Special focus on place as site of identity, memory, and creative production. S/U or letter grading.

233. Community Cultural Development in Public Art: From Neighborhood to Global. (4) Seminar, three hours, one hour. Design for gradu-
ate students. Artist approaches to transformations of local and global communities through aesthetic prac-
tices in visual arts, spoken word, visual performance, music, and dance that include participatory audience inclusion and civic dialogue and community ad-
vocacy and activism. Issues of cultural democracy based in cultural retention and affirmation. Case stud-
ies of Chicana/o community development projects provide contemporary examples of evolving field of work and basis for critical analysis. S/U or let-
ter grading.

234. New Social Media and Activist Art. (4) Studio, four hours. Limited to graduate students. Hands-on learning and production experience as essential to full understanding of modern media. Promotion of prag-
matic style of humanistic and social scientific scholar-
ship that prepares students to think critically and pro-
ductively about media form, content, and context while learning to effectively use social media. S/U or letter grading.

C251. Chicana and Latin American Women’s Nar-
rative. (4) Lecture, three hours, one hour. Development of knowledge of Spanish (level 4). Analyses, compari-
sions, and discussion of narrative literary production of U.S. Chicana writers and their Latin American counterparts in English and Spanish, with particular focus on how each group deals with gender, ethnic, and class issues. Concurrently scheduled with course C141. Letter grading.

252. Cultural Representations in Americas. (4) Seminar, three hours. Analysis of Latina/Latino and Latin American fictional and nonfictional narratives and films, with emphasis on gender issues, diaspo-
ras, and global transformation. Use of aesthetic and formal analytical perspectives and several conceptual frameworks — cultural studies, postcolonial studies, neoliberalism, intersectionality, and feminist theories.

253. Tenth Muses of Chicana Theory. (4) Seminar, three hours. Chicana lesbian feminist theory in its multiple and historical manifestations, beginning in 17th century with early proto-feminist work of Sor Juana, through the Chicana Lesbian movement. Well known woman over as first feminist of America. Explo-
ration of Sor Juana’s feminist legacy in 20th-century Chicana lesbian and Chicana feminist theorists and scholars, such as Gloria Anzaldúa, Cherrie Moraga, Emma Pérez, Chela Sandoval, Norma Alarcón, and Alicia Arrízón. Discussion of foundational theoretical concepts such as Anzaldúa’s foundational concepts of mundo zurdito, nepantla, mestiza consciousness, and conocimiento; Pérez’s sitio y lengua and decolo-
rization, and the development of Chicana/Latina social theory, of rap-
pressed, differential consciousness, and hermeneu-
tics of love; and Arzón’s postcolonial queer mestiza-
je. How to apply several of these theories in disclo-
ralization of one revered cultural icon, is Virgen de Guadalupe. Overview of Chicana lesbian and Chicana feminist theory/Chicana studies. Concurrently scheduled with course CM133. Letter grading.

254. Los Angeles: History, Space, and Culture. (4) Seminar, three hours. Exploration of significance of Los Angeles as birthplace of Chicana/Chicano identi-
ty and Chicana/Latina culture and community in Southern California. Histo-
riography of Latino Los Angeles from Spanish con-
quest to present, with emphasis on labor, immigra-
tion, and Chicana/Latina culture and community. S/U or letter grading.

255. Mass Media Research Methods. (4) Seminar, three hours. Limited to graduate students. Survey of range of qualitative and quantitative communication methods and findings regarding Chicana/Chicana and Latina/Latino topics for all media types in both English and Spanish. Critical evaluation of research findings across this expansive field and design of complex research problems. S/U or letter grading.

257. Bilingual Writing Workshop. (4) Seminar, four hours. Limited to graduate students. Writing sample required; access to course webpage mandatory; need not be bilingual to enroll. Technical instruction, analy-
sis, and theoretical discussion of bilingual creative ex-
pression through genre of short fiction. Bilingualism as both politics and aesthetics be central theme. Discussion and analysis of Chicana/Chicana and Lati-
na/Latino short story collections, Peer critique of weekly writing assignments. Emphasis on narrative techniques such as characterization, plot, conflict, setting, point of view, and dialogue, and magical real-
ism versus Chicana/Latina writer’s range of qualitative and quantitative communication analyses for communities. Topics include critical race theory, Treaty of Guadalupe-Hidalgo, legal con-
struction of Mexican American racial identity, historic educational segregation, contemporary educational issues, jury rights, Chicano movement, and undocu-
mented immigration. S/U or letter grading.

291. Variable Topics Research Seminars: Chicana and Chicano Studies. (4) Seminar, three hours. Lim-
ited to graduate students. Seminar research organ-
ized around readings and a paper and discussion of critical topic of interest in field. Exploration of issue, field, and implications for other communities. Topics vary according to faculty advisor. Research project required. May be repeated for credit with consent of director of graduate studies. S/U or letter grading.

375. Teaching Apprentice Practicum. (1 to 4) Semi-
nar, to be arranged. Preparation: apprentice person-
nel employment as teaching assistant, associate, or fellow. Teaching apprenticeship under active guide-
ance and supervision of regular faculty member re-
sponsible 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/Chicana studies. Exploration of diverse classroom strategies and pedagogical techniques specific to interdisciplinary field. Topics include preparing for discussion ses-
sions, promoting discussion among students, using class websites, office hours, grading, and campus resources. May be repeated once for credit. S/U grading.

596. Directed Individual Study or Research. (4 to 8) Tutorial, to be arranged. Directed individual re-
search and study in area related to Chicana/Chicana studies or subjects not offered as regular courses, arranged individually by student and instructor. May be repeated for maximum of 8 units. S/U or letter grading.

597. Preparation for Ph.D. Qualifying Examination. (2 to 12) Tutorial, to be arranged. Limited to depart-
mental graduate students. Preparation for Ph.D. qualifying examination. Mandatory and sup-
plemental reading lists prepared by student advisory committees. May be repeated for maximum of 12 units. S/U grading.

599. Research for Ph.D. Dissertation. (4 to 12) Tu-
torial, to be arranged. Limited to Ph.D. students who have passed qualifying examinations. Research for and preparation of Ph.D. dissertation under direction
of dissertation committee chair. May not be applied toward Ph.D. degree requirements. May be repeated for maximum of 6 units. S/U grading.

CIVIC ENGAGEMENT
Interdisciplinary Minor
College of Letters and Science

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Jennifer A. Jay, Ph.D., Chair

Faculty Committee
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Jan de Leeuw, Ph.D. (Statistics)
Barbara Drucker, M.F.A. (Art)
Jennifer A. Jay, Ph.D. (Civil and Environmental Engineering)
Reynaldo F. Macias, Ph.D. (Applied Linguistics, Chicana and Chicano Studies, Education)
Meredith Phillips, Ph.D. (Public Policy, Sociology)
Olga T. Yokoyama, Ph.D. (Applied Linguistics)
M. Min Zhou, Ph.D. (Asian American Studies, Sociology)

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 (CAPPP) program in Washington, DC.

Undergraduate Study
Civic Engagement Minor

The Civic Engagement minor integrates local, state, and national internships with an academic context that enriches the valuable learning gained through meaningful work.

To enter the minor, students must (1) have an overall grade-point average of 2.7 or better, (2) submit a completed application endorsed by a faculty sponsor, and (3) submit a written statement describing how civic engagement relates to their academic interests or career goals. Applications are available in A265 Murphy Hall.

Students who complete the minor with a grade-point average of at least 3.5 in their minor coursework, an overall GPA of 3.5, and Civic Engagement 198 for their capstone experience qualify for graduation with College Honors.

Required Lower Division Course (4 or 5 units): One course, with a grade of C or better, from English 4WS, General Education Clusters M24CW with a service learning component approved by petition (if selected, General Education Clusters M24A and M24B must also be taken), General Education Clusters 80B (if selected, General Education Clusters 80A and 80CW must also be taken), History 2B, Political Science 10, Public Policy 10A, or Sociology 1.

Students who enroll in a lower division course without a service learning component are required to (1) present evidence of regular participation in a substantive service project or (2) select a service learning course as their upper division elective.


Required Upper Division Internship Courses (12 to 14 units): Students must select from either local, state, or national internship locations as follows:

Local Los Angeles area internships span three consecutive terms at the same internship location. Students enroll in three consecutive terms of Civic Engagement 195CE. Placements are selected in consultation with the Center for Community Learning minor coordinator and are based on both student interest and faculty recommendations.

State internships span one term through participation in the University of California Center in 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 UCCS program are available at http://uccs.ucdavis.edu.

National internships span one term through participation in the Center for American Politics and Public Policy (CAPPP) program in Washington, DC. In the Fall or Spring Quarter program, students enroll in History/Political Science/Sociology M191DC and M195DC; in the Winter Quarter program, students enroll in History/Political Science/Sociology M194DC and M195DC plus one 4-unit elective course. Students must enroll in a minimum of 12 units of upper division courses to satisfy the internship requirement. Applications for the CAPPP program are available at http://www.cappp.ucla.edu.

Required Upper Division Capstone Courses (6 units): Civic Engagement 194 with a grade of B or better, and 198 or 199. Prior to enrolling in course 198 or 199, students must complete Civic Engagement 194 and all other requirements for the minor, with the exception of the three-term local internship which may be completed concurrently with the capstone course.

The capstone experience for the minor requires an integrative final paper or project that incorporates the required curriculum and elective courses. Students complete the capstone experience under the guidance of a faculty sponsor and enroll in either Civic Engagement 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.

A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor.

Each minor course must be taken for a letter grade, and students must have an overall grade-point average of 3.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

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 mentors who work with the general civic engagement 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.

95A–95B. Introduction to Community-Based Internships. (2–4) Tutorial, one hour; fieldwork, four hours (course 95A) and 10 hours (course 95B). Course 95A is not requisite to 95B. Introduction to community-based work for students in specialized UCLA scholarship programs. 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. Individual contract with supervising faculty member required. P/NP or letter grading.
180. Access to Justice: Hope and Reality. (4) Seminar, three hours. Limited to UCLA students who are members of JusticeCorps program through AmeriCorps. JusticeCorps was established as an 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 system, including origins and current status of legal services and self-help movements, including role of JusticeCorps. Were these strategies designed to make promise of equal justice a reality or have they inadvertently, or intentionally, resulted in two-tiered legal system -- one for those with means and another for those without? P/NP or letter grading.

194. Capstone Research Seminar. (2) Formerly numbered M194C) Seminar, two hours. Enforced requisites: course 195CE. Required of students pursuing Civic Engagement minor. Integration of off-campus work with academic theories and concepts within field of civic engagement. Students report on their internships and experiences and analyze relationship between their internship and issues of policy, ethics, systemic responses to community needs, or personal and intellectual transformations. Students identify one faculty mentor and develop proposal for required capstone research project. Letter grading.

194A. Astin Civic Engagement Research Seminar. (2) Seminar, two hours. Limited to students in Astin civic engagement spring training program. Integration of off-campus work with academic theories and concepts within field of civic engagement. Students report on their internship experiences and analyze relationship between their internship and issues of policy, ethics, systemic responses to community needs, or personal and intellectual transformations. Students identify one faculty mentor and develop proposal for civic engagement research project. Letter grading.

195. Community or Corporate Internships in Civic Engagement. (4) Tutorial, one hour; fieldwork, eight hours. Limited to juniors/seniors in Civic Engagement minor. Internship in supervised setting in corporate, governmental, or nonprofit setting, using knowledge base of civic engagement. Students submit weekly writing assignments and final paper that examine civic issues related to meaningful work at internship site. Students expected to learn ways in which individuals and groups can organize to solve problems, analyze issues, or bring about change in democratic society. Must be repeated for three consecutive terms to fulfill minor requirements. Individual contract with supervising faculty member. 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 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. Letter grading.

198. Honors Research in Civic Engagement. (4) Tutorial, one hour. Required capstone course to Civic Engagement minor for students pursuing College Honors. Development and completion of honors thesis or comprehensive research project under direct supervision of faculty member. Individual contract required. Letter grading.

199. Directed Research or Senior Project in Civic Engagement. (4) Tutorial, one hour. Required capstone course to Civic Engagement minor. Supervised individual research or investigation under guidance of faculty mentor. Culminating paper or project required. Individual contract required. Letter grading.
eering, hydrology and water resources engineering, and structural engineering and mechanics. This program is an excellent foundation for entry into professional practice in civil engineering or for more advanced study. The department also offers the undergraduate Environmental Engineering minor.

At the graduate level, M.S. and Ph.D. degree programs are offered in the areas of civil engineering materials, environmental engineering, geotechnical engineering, hydrology and water resources engineering, and structures (including structural/earthquake engineering and structural mechanics). In these areas, research is being done on a variety of problems ranging from basic physics and mechanics problems to critical problems in earthquake engineering and in the development of new technologies for pollution control and water distribution and treatment.

Undergraduate Study

The civil engineering program is accredited by the Engineering Accreditation Commission of ABET. See http://www.abet.org.

The Civil Engineering major is a designated capstone major. In each of the major field design courses, students work individually and in groups to complete design projects. To do so, they draw on their prior coursework, research the needed materials and possible approaches to creating their device or system, and come up with creative solutions. This process enables them to integrate many of the principles they have learned previously and apply them to real systems. In completing their projects, students are also expected to demonstrate effective oral and written communication skills, as well as their ability to work productively with others as part of a team.

Civil Engineering B.S.

Capstone Major

Preparation for the Major

Required: Chemistry and Biochemistry 20A, 20B, 20L; Civil and Environmental Engineering 1, 1C; Computer Science 31 (or another programming course approved by the Faculty Executive Committee); Mathematics 31A, 31B, 32A, 32B, 33A, 33B; Physics 1A, 1B, 1C, 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 or from the list of additional elective laboratory options:

Environmental Engineering: Required: One capstone design course from Civil and Environmental Engineering 157B or 157C; recommended courses: 154, 155, 163, 164, M165, M166; laboratory courses: 156A, 156B.

Geotechnical Engineering: Required: One capstone design course (Civil and Environmental Engineering 121) and one additional capstone design course from 123, 144, 147, 157B, or 157C; recommended courses: 1204, 123, 125, C182, Earth and Space Sciences 139; laboratory course: Civil and Environmental Engineering 128L.

Hydrology and Water Resources Engineering: Required: One capstone design course (Civil and Environmental Engineering 151) and one additional capstone design course from 123, 144, 147, 157B, or 157C; recommended courses: 157A, 157M; laboratory courses: 157L, 157M.

Structural Engineering and Mechanics: Required: Civil and Environmental Engineering 135B; one lecture course from 1330, M135C, 137, 141, or 142; one capstone design course from 141 or 143 and one additional capstone design course from 123, 144, 147, 151, 157B, or 157C; recommended courses: C104, 121, 125, 130, 137, 141, 142, 143, 144, 147, C182; laboratory courses: 130L, 135L, 137L, 140L, 142L.

Additional Elective Options: Atmospheric and Oceanic Sciences 141, Civil and Environmental Engineering 105, 106A, 180, 181, Earth and Space Sciences 101, 101, Environment 157, Mechanical and Aerospace Engineering 166C, M168; laboratory course: Civil and Environmental Engineering 128L.

For information on University and general education requirements, see the College and Schools section earlier in this catalog.

Environmental Engineering Minor

The Environmental Engineering minor is designed for students who wish to augment their major program of study with courses addressing issues central to the application of environmental engineering to important environmental problems facing modern society in developed and developing countries. The minor provides students with a greater depth of experience and understanding of the role that environmental engineering can play in dealing with environmental issues.

To enter the minor, students must be in good academic standing (2.0 grade-point average or better) and file a petition in the Office of Academic and Student Affairs, 6426 Boelter Hall.

Required Lower Division Course (5 units): Mathematics 3C or 32A.

Required Upper Division Courses (24 units minimum): Civil and Environmental Engineering 153 and five courses from 151, 154, 155, 156A, M166, Chemical Engineering C118, Environmental Health Sciences C125, C164.

A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor, and at least 16 units applied toward the minor must be taken in residence at UCLA. Transfer credit for any of the above is subject to departmental approval; consult 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://grad.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 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; outside study, four hours. Introduction to scope 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. Selection of topics in programming, with emphasis on numerical techniques and methodology as applied to civil engineering programs. Letter grading.

58SL. Climate Change, Water Quality, and Ecosystem Functioning. (5) Lecture, four hours; service learning, two hours; outside study, nine hours. Science related to climate change, water quality, and ecosystem health. Topics include carbon and nutrient cycling, hydrologic cycle, ecosystem structure and services, biodiversity, basic aquatic chemistry, and impacts of climate change on ecosystem functioning and water quality. Participation in series of science education projects to elementary or middle school audience. Letter grading.

85. Professional Practice Issues in Structural Engineering. (2) Seminar, two hours; outside study, four hours. Introduction to issues of professional practice in structural engineering. Content and organization of model building codes and material-specific reference standards. Interpretation of architectural and structural design drawings and specifications. Material-independent structural calculations such as tributary area, multistory 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


102. Principles of Soil Mechanics. (4) Lecture, four hours; discussion, two hours; outside study, six hours. Requisite: course 15. Mathematics 33B (may be taken concurrently). Introduction to numerical computing with specific applications in civil and envi- ronmental engineering. Topics include error and com- putor arithmetic, root finding, curve fitting, numerical integration, and element compositions of systems of linear and nonlinear equations, numerical solution of ordinary and partial differential equations. Letter grading.

104. Structure, Processing, and Properties of Civil Engineering Materials. (4) (Formerly numbered 104.) Lecture, four hours; discussion, two hours; out- side study, six hours. Enforced requisites: course 101, Chemistry 20A, 20B, Materials Science 104, Mathe- matics 31A, 31B, 32B, Physics 1A, 1B, 1C. Enforced corequisite: course 108. Discussion of aspects of ce- ment and concrete materials, including manufacture of cement and production of concrete. Aspects of ce- ment composition and basic chemical reactions, mi- crostructure, properties of plastic and hardened con- crete, chemical admixtures, and quality control and acceptance testing. Development and testing of struc- tural materials for complete understanding of overall re- sponse of all civil engineering materials. By end of term, successful utilization of fundamental materials science concepts to understand, explain, analyze, and describe engineering performance of civil engi- neering materials. Concurrently scheduled with course C204. Letter grading.

105. Technical Communication. (4) Lecture, four hours; computer laboratory, two hours. Techniques for ef- fectively communicating technical material accurately, clearly, and briefly, with emphasis on writing and de- velopment 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. Top- ics include organization of information; application of technical terms to achieve unity, coherence, and develop- ment; use of parallel grammatical structure effectively; avoidance of common writing errors; and preparation and delivery of oral presentations. Letter grading.


109. Introduction to Probability and Statistics for Engineers. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Requisites: Mathematics 32A, 33A. Recommended: course 15. Introduction to fundamental concepts and applications of probability and statistics in civil engi- neering, 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 con- cepts, random variables, probability distributions, functions of random variables, estimating parameters from observational data, regression, hy- pothesis 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 struc- ture and as material of construction. Soil forma- tion, classification, physical and mechanical proper- ties, soil compaction, earth pressures, consolidation, and shear strength. Letter grading.

121. Design of Foundations and Earth Structures. (4) Lecture, four hours; discussion, two hours; outside study, six hours. Requisite: course 120. Design meth- ods for foundations and earth structures. Site investig- ation, including evaluation of soil properties for de- sign. Design of footings and piles, including stability and settlement. Design of slopes and earth retaining structures. Letter grading.

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 soils, and design of repair methodologies for those prob- lems. Within context of above technical problems, emphasis on preparation of professional engineering documents such as proposals, work acknowledge- ments, figure legends, and specifications. Letter grading.


128L. Soil Mechanics Laboratory. (4) Lecture, one hour; laboratory, eight hours; outside study, three hours. Requisite or corequisite: course 120. Laborato- ry experiments to be performed by students to obtain soil parameters required for assigned design prob- lems. Soil classification, grain size distribution, Atter- berg limits, specific gravity, compaction, expansion index, consolidation, shear strength determination. Design problems, laboratory report writing. Letter grading.

129L. Engineering Geometrics. (4) (Formerly num- bered 129L) Lecture, two hours; recitation, two hours; laboratory, four hours; outside study, four hours. Col- lection, processing, and analysis of geospatial data. Ellipsoid and goid models of shape of Earth. Sea level- ing, height, and angles. Elements and usage of topographic data and maps. Advanced global positioning systems (GPS) for high-precision mapping. Advanced laser-based light detection and ranging (LiDAR) and reflective terrain analysis and change detection. Hydrographic survey mapping. Letter grading.

130. Elementary Structural Mechanics. (4) Lecture, four hours; discussion, two hours; outside study, six hours. Requisite: Analysis of stresses and strain, phenomenological material behavior, exten- sion, bending, and transverse shear stresses in beams with general cross-sections, shear center, de- formation of beams, torsion of beams, warping, column buckling, and frame instability. Letter grading.


135A. Elementary Structural Analysis. (4) Lecture, four hours; discussion, two hours; outside study, six hours. Requisites: courses 15, 103, 108. Introduction to structural analysis; classification of structural ele- ments; analysis of statically determine trusses, beams, and frames; deflections in elementary struc- tures; virtual work; analysis of indeterminate struc- tures using force method; introduction to replace- ment method and energy concepts. Letter grading.

135B. Intermediate Structural Analysis. (4) Lecture, four hours; discussion, two hours; outside study, six hours. Requisite: course 135A. Analysis of truss and frame structures using matrix methods; matrix force methods; matrix displacement method; analysis concepts based on theories of virtual work; moment distribution. Letter grading.

M135C. Introduction to Finite Element Methods. (4) (Same as Mechanical and Aerospace Engineering ME 135C) Lecture, four hours, one hour; out- side study, seven hours. Requisite: course 130 or Me- chanical and Aerospace Engineering 156A or 166A. Introduction to basic concepts of finite element meth- ods (FEM) and applications to elastic solids and struc- tural mechanics and heat transfer. Direct matrix structural analysis; weighted residual, least squares, and Ritz approximation methods; shape functions; conver- gence properties; isoparametric multi-dimensional heat and flow elasticity; numerical inte- gration. Practical use of FEM software; geometric and analytical modeling; preprocessing and postprocess- ing techniques; term projects with computers. Letter grading.


137. Elementary Structural Dynamics. (4) Lecture, four hours; discussion, two hours; outside study, six hours. Requisite: course 135B. Basic structural dy- namics course for civil engineering students. Elastic free, forced vibration, and earthquake response spec- tra analysis for single and multidegree of freedom sys- tems. 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. Calibra- tion of instrumentation for dynamic measurements. Determination of natural frequencies and damping factors from free vibrations. Determination of natural frequencies, mode shapes, and damping factors from forced vibrations. Dynamic simulation. Letter grading.

140L. Structural Components and Systems Testing Laboratory. (4) Lecture, two hours; laboratory, six hours; outside study, four hours. Enforced requisite: 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 simple building systems. Quasi-static tests focus on assessment of element or subsystem stiff-
ness, strength, and deformation capacity, whereas dynamic tests focus on assessment of periods, mode shapes, and damage. Development of communication skills through preparation of laboratory reports and oral presentations. Letter grading.


142L. Reinforced Concrete Structural Laboratory. (2) Lecture, two hours; laboratory, six hours. Study of design and construction of reinforced concrete structures. Letter grading.

143. Design of Prestressed Concrete Structures. (4) Lecture, four hours; discussion, two hours; outside study, six hours. Requisites: courses 135A, 142. Prestressing and post-tensioning techniques. Properties of concrete and prestressing steels. Design considerations: anchorage/bonding of cables/wire, flexure analysis by superposition and strength methods, draping of cables, prestress transfer, bond, and stiffness of column and beam sections, prestressing tendons, and prestressing steels. Letter grading.


150. Introduction to Hydrology. (4) Lecture, four hours; discussion, two hours; outside study, six hours. Enforced requisites: course 15, Mechanical and Aerospace Engineering 103. Study of hydrologic cycle and relevant atmospheric processes, water and energy balance, radiation, precipitation formation, infiltration, evaporation, vegetation transpiration, groundwater, river, storm runoff, and flood processes. Letter grading.

151. Introduction to Water Resources Engineering. (4) Lecture, four hours; discussion, two hours; outside study, six hours. Enforced requisites: course 150, Mechanical and Aerospace Engineering 103. Recommended: courses 103, 110. Principles of hydraulics, flow of water in open channels and pressure conduits, reservoirs and dams, hydraulic machinery, hydrometric power, river analysis and design, applied to water resources engineering. Letter grading.


154. Chemical Fate and Transport in Aquatic Environments. (4) Lecture, four hours; discussion, two hours; outside study, six hours. Requisite: course 153. Fundamental physical, chemical, and biological principles governing movement and fate of chemicals in surface waters and groundwater. Topics include phase behavior, fate in aquatic environments, air-water exchange, acid-base equilibria, oxidation-reduction chemistry, chemical sorption, biodegradation, and bioaccumulation. Practical quantitative problems solved considering both reaction and transport of chemicals in environment. Letter grading.

155. Unit Operations and Processes for Water and Wastewater Treatment. (4) Lecture, four hours; discussion, two hours; outside study, four hours. Requisites: course 153 (may be taken concurrently), Chemistry 20A, 20B. Basic laboratory techniques in chemical analysis and environmental analysis. Topics include use of analytical methods that are used in unit operation experiments that include reactor dynamics, chemical, biological, and physical properties of nanomaterials, (2) trans- ferent biotechnology. Letter grading.

156A. Environmental Chemistry Laboratory. (4) Lecture, four hours; laboratory, four hours; outside study, four hours. Requisites: course 153 (may be taken concurrently), Chemistry 20A, 20B. Basic laboratory techniques in analytical chemistry related to water and wastewater analysis. Selected experiments include gravimetric analysis, titrimetry, spectrophotometry, redox systems, pH and electrical conductivity. Concepts to be applied to analysis of “real” water samples in course 156B. Letter grading.

156B. Environmental Engineering Unit Operations and Processes Laboratory. (4) Lecture, four hours; laboratory, four hours; outside study, four hours. Requisites: Chemistry 20A, 20B. Characterization and analysis of typical natural waters and waste waters for inorganic and organic constituents. Select- ed experiments include analysis of solids, nitrogen species, oxygen demand, and chlorine residual, that are used in unit operation experiments that include re-actor dynamics, chemical, biological, and physical properties of nanomaterials. Letter grading.

157A. Hydrologic Modeling. (4) Lecture, four hours; discussion, two hours; outside study, six hours. Requisite: course 151. Introduction to hydro- logic modeling. Topics selected from areas of (1) open-channel flow, including one-dimensional steady flow, unsteady flow, and sediment transport, (2) pipe flow and water distribution systems, (3) rainfall-runoff modeling, and (4) groundwater flow modeling, with focus on use of industry and/or research standard models with locally relevant applications. Letter grading.

157B. Design of Water Treatment Plants. (4) Lecture, four hours; discussion, two hours; laboratory, four hours; outside study, four hours. Requisite: course 155. Water quality standards and regulations, overview of treatment processes, use of unit op- erations, predesign of water treatment plants, hydraulics of plants, process control, and cost estimation. Letter grading.

157C. Design of Wastewater Treatment Plants. (4) Lecture, four hours; outside study, eight hours. Reqv- isite: course 155. Process design of wastewater treat- ment plants, including primary and secondary treat- ment, detailed design review of existing plants, pro- cess control, and economics. Letter grading.

157L. Hydrologic Analysis. (4) Lecture, two hours; laboratory, four hours; outside study, six hours. Req- uisite: course 150. Collection, compilation, and inter- pretation of data for quantification of components of hydrologic cycle, hydroclimatology, water balance, evaporation, infiltration, and runoff. Use of hydraulic variables and parameters for development, construction, and appli- cation of analytical models for selected problems in hydrology. Letter grading.

157M1. Hydrology of Mountain Watersheds. (4) Lecture, one hour; fieldwork, four hours; laboratory, three hours; outside study, four hours; one field trip. Requi- site: course 150 or 157L. Advanced field- and labora- tory-based course with for hydrologic, chemical, and geochemical processes in snow-dominated and mountainous regions. Students measure and quantify snowpack properties, snowmelt, discharge, evapora- tion, infiltration, soil properties, and local meteorology, as well as investigate geochemical properties of surface and groundwater systems. Exploration of rating curves, stream classification, and flooding potential. Environmental field trip required. Letter grading.

163. Introduction to Atmospheric Chemistry and Air Pollution. (4) Lecture, four hours; outside study, eight hours. Requisites: course 153, Chemistry 20A, 20B, Mathematics 31A, 31B, Physics 1A, 1B. Description of processes affecting chemical composition of troposphere: air pollutant concentrations/stand- ards, urban and regional ozone, aerosol pollution, formation/deposition of acid precipitation, fate of an- thropogenic/biogenic/natural chemical compounds, selection of chemical species and potential application to environmental protection. Technical contents include three multidisciplinary areas: (1) physical, chemical, and biological properties of nanomaterials, (2) trans- port, reactivity, and toxicity of nanoscale materials in natural environmental systems, and (3) use of nanotechnology for energy and water production, plus environment protection, monitoring, and remediation. Letter grading.

M156. Environmental Microbiology. (4) (Same as Environmental Health Sciences M166L.) Lecture, four hours; discussion, two hours; outside study, six hours. Recommended requisite: Engineering M103. Introduction to potential implica- tions of nanotechnology to environmental systems as well as potential application of nanotechnology to envi- ronmental protection. Technical contents include three multidisciplinary areas: (1) physical, chemical, and biological properties of nanomaterials, (2) trans- port, reactivity, and toxicity of nanoscale materials in natural environmental systems, and (3) use of nanotechnology for energy and water production, plus environment protection, monitoring, and remediation. Letter grading.

M166L. Environmental Microbiology and Biotechnol- ogy Laboratory. (1) (Same as Environmental Health Sciences M166L.) Lecture, two hours; outside study, two hours. Corequisite: course M166. General laboratory practices within environmental mi- crobiology, including sampling of environmental samples, classical and modern molecular techniques for enumera- tion of microbes from environmental samples, tech- niques for determination of microbial activity in environmental samples, laboratory and computer lab- oratory 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. Ca- pacity considerations including time-space diagrams and queueing. Components of transportation system design, including horizontal and vertical alignment, cross sections, earthwork, drainage, and pavements. Letter grading.


223. Slope Stability and Earth Retention Systems. (4) Lecture, four hours; outside study, eight hours. Requisites: courses 120, 121, 220. Basic concepts of stability of earth slopes, including shear strength, design charts, limit equilibrium analysis, seepage analysis, staged construction, and rapid drawdown. Stability of earth pressures behind retaining structures, with special application to design of retaining walls, sheet piles, mechanically stabilized earth, soil nails, and anchorage systems. Letter grading.


225. Geotechnical Earthquake Engineering. (4) Lecture, four hours; outside study, eight hours. Requisites: courses 220, 224. (May be taken concurrently.) Analysis of earthquake-induced ground failure, including soil liquefaction, cyclic softening of clays, seismic compression, surface fault rupture, and seismic slope stability. Ground response effects on earthquake ground motions. Soil-structure interaction, including inertial and kinematic interaction and foundation deformations under seismic loading. Letter grading.

226. Geoenvironmental Engineering. (4) Lecture, four hours; outside study, eight hours. Requisite: course 220. Field of geoenvironmental engineering involves application of geotechnical principles to environmental problems. Topics include environmental regulations, waste characterization, geosynthetics, solid waste landfills, subsurface barrier walls, and disposal of high water content materials. Letter grading.

227. Numerical Methods in Geotechnical Engineering. (4) Lecture, four hours; outside study, eight hours. Requisite: course 220. Introduction to basic concepts of computer modeling of soils using finite element method, and to constitutive modeling based on elasticity and plasticity theories. Special emphasis on numerical applications and identification of modeling concerns such as instability, bifurcation, nonexistence, and nonuniqueness of solutions. Letter grading.

228L. Advanced Soil Mechanics Laboratory. (4) Lecture, one hour; laboratory, six hours; outside study, six hours. Required: course 220. Laboratory investigations and exercises related to soil mechanics 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 M230A. Kinematics of deformation, material and spatial coordinates, deformation, stress and strain, linear and geometric problems, Cartesian tensors, infinitesimal strain tensor; Cauchy stress tensor; strain energy; equilibrium equations; linear constitutive relations; plane elastostatic problems, holes, corners, inclusions, cracks; three-dimensional problems of Kelvin, Boussinesq, and Cerrutti. Introduction to boundary integral equation method. 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, stress and strain, linear and geometric problems, Cartesian tensors, infinitesimal strain tensor; Cauchy stress tensor; strain energy; equilibrium equations; linear constitutive relations; plane elastostatic problems, holes, corners, inclusions, cracks; three-dimensional problems of Kelvin, Boussinesq, and Cerrutti. Introduction to boundary integral equation method. Letter grading.


232. Theory of Plates and Shells. (4) Lecture, four hours; outside study, eight hours. Requisite: course 130. Small and large deformation theories of thin plates; energy methods; free vibrations; membrane theory of 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.

235A. Advanced Structural Analysis. (4) Lecture, four hours; outside study, eight hours. Requisite: course 135A. Recommended: course 135B. Review of matrix force and displacement methods of structural analysis; virtual work theorem, virtual forces, and displacements; theorems on stationary value of total and complementary potential energy, minimum total potential energy, Maxwell/Betti theorems, effects of approximations, introduction to finite element analysis. Letter grading.

235B. Finite Element Analysis of Structures. (4) Lecture, four hours; outside study, eight hours. Requisite: course 235A. Basic concepts of the finite element method and its application to analysis, design, and optimization of structures. Development of finite element models for membrane, plate, shell structures; instability effects. Letter grading.
235C. Nonlinear Structural Analysis. (4) Lecture, four hours; outside study, eight hours. Requisite: course 235B. Material nonlinearities; conservative, nonconservative material behavior; geometric nonlinearities, Lagrangian, Eulerian description of motion; finite element methods in geometrically nonlinear problems; postbuckling behavior; solution of differential equations; incremental, iterative, 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 on design of 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 design of beam-column joints. Introduction to displacement-based design and applications of strut-and-tie 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 approaches, 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. Requisites: courses 142 or 144. Rainfall-runoff modeling, dynamic scale models, spatial and temporal variability, and modeling of uncertainties in structural loads 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 response history analysis. 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 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 contemporary 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, viscoelastic and hysteretic behavior, elasto-plastic bearing under compression and bending, buckling of bearings, sliding bearings, passive energy dissipation devices, dynamic behavior of structures, passive energy dissipation devices, static and dynamic analysis procedures, code provisions and design methods for seismically isolated structures. Letter 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 interrelation of major topics such as rainfall and evaporation, soils and infiltration properties, runoff and snowmelt processes. Introduction to rainfall-runoff modeling, floods, and policy issues involved in water resource engineering and management. Letter grading.


250C. Hydrometeorology. (4) Lecture, four hours; outside study, eight hours. Requisite: course 250A. In-depth study of hydrometeorological processes. Role of hydrology in climate system, precipitation and evaporation processes, atmospheric radiation, exchange of mass, and heat, and momentum between soil and atmosphere. Hydrologic cycle, cloud and 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. Requisites: courses 151, 250A. Application of hydrologic modeling techniques to water resources systems. Topics include reservoir management and operation; optimal timing, sequencing and sizing of water resources projects; and multiobjective planning and control of water use of surface and groundwater. Emphasis on management of water quantity. Letter grading.

251A. Rainfall-Runoff Modeling. (4) Lecture, four hours; outside study, eight hours. Requisites: courses 250A, 251B. Introduction to hydrologic modeling concepts, including rainfall-runoff analysis, input data, uncertainty analysis, lumped and distributed modeling, parameter estimation and optimization, and application of models for flood forecasting and prediction of streamflows in water resource applications. Letter grading.

251B. Contaminant Transport in Groundwater. (4) Lecture, four hours; outside study, eight hours. Requisites: courses 250A, 250C. Introduction to basic physical concepts of remote sensing as they relate to surface and atmospheric hydrologic processes. Applications include radiative transfer modeling and retrieval of hydrologically relevant parameters like topography, soil moisture properties, vegetation, and precipitation. Letter grading.

251C. Remote Sensing with Hydrologic Applications. (4) Lecture, four hours; outside study, eight hours. Requisites: courses 250A, 250C. Introduction to basic concepts of classical and Bayesian estimation theory for purposes of hydrologic data assimilation. Applications geared toward assimilating disparate observations into dynamic models of hydrologic systems. Letter grading.

252. Engineering Economic Analysis of Water and Environmental Planning. (4) Lecture, four hours; outside study, eight hours. Requisites: courses 106A, one or more courses from Economics 2, 11, 100, 101, 102. Basic principles of economic theory and structural analysis of public and private decisions. Application of economic analysis to management of water and environmental problems; application of price theory to water resource management and renewable resources; benefit cost analysis and applications to water resources and environmental planning. Letter grading.


254A. Environmental Aquatic Inorganic Chemistry. (4) Lecture, four hours; outside study, eight hours. Requisites: Chemistry 20B, Mathematics 31A, 31B, Physics 1A, 1B, Equilibrium and kinetic descriptions of chemical behavior of metals and inorganic ions in natural fresh/marine surface waters and in water treatment. Processes include acid-base chemistry and alkalinity (carbonate system), complexation, precipitation/dissolution, absorption oxidation/reduction, and photochemistry. 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, anaerobic gas transfer, chemical oxygen demand, oxidation, and membrane processes. Letter grading.
255B. Biological Processes for Water and Wastewater Treatment. (4) Lecture, four hours; outside study, four hours. Requisites: courses 254A, 255A. Fundamentals of environmental engineering microbiology; kinetics of microbial growth and biological oxidation; applications for activated sludge, gas transfer, fixed-film processes, aerobic and anaerobic digestion, membrane disposal, and biological nutrient removal. Letter grading.

258A. Membrane Separations in Aquatic Systems. (4) Lecture, four hours; outside study, eight hours. Requisites: course 255A. Applications of membrane separations to desalination, water reclamation, brine disposal, and ultrapure water systems. Discussion of reverse osmosis, ultrafiltration, electrodeionization, and ion exchange technologies from both practical and theoretical standpoints. Letter grading.

259A. Selected Topics in Environmental Engineering. (2) Lecture, two hours; outside study, four hours. Review of recent research and developments in environmental engineering. Water and wastewater treatment systems, nonpoint pollution, multimedia impacts. May be repeated for credit. S/U grading.

259B. Selected Topics in Water Resources. (2 to 4) Lecture, four hours; outside study, eight hours. Review of recent developments and current applications to surface and groundwater, water resources, supply and hydrology, global climate change, economic planning, optimization of water resources development. May be taken for maximum of 4 units. Letter grading.

260. Advanced Topics in Hydrology and Water Resources. (4) Lecture, four hours; outside study, eight hours. Requisites: courses 250A, 250B, 250D. Current research topics in inverse problem of parameter estimation, experimental design, conjunctive use of surface and groundwater, multiobjective water resource 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. Requisites: courses 250A, 255A, 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.

M262A. Introduction to Atmospheric Chemistry. (4) (Same as Atmospheric and Oceanic Sciences M203A) Lecture, three hours. Requisite: for undergraduates: Chemistry 20B. Principles of chemical kinetics, thermochromy, spectroscopy, and photochemistry; chemical composition and history of Earth's atmosphere; biogeochemical cycles of key atmospheric constituents; basic photochemistry of troposphere and stratosphere, upper atmosphere chemistry, photochemical processes. A-1: pollution; chemistry and climate. S/U or letter grading.

M262B. Atmospheric Diffusion and Air Pollution. (4) (Same as Atmospheric and Oceanic Sciences M224B) Lecture, three hours. Nature and sources of atmospheric pollution; atmospheric diffusion from point, line, and area sources; pollution dispersion in urban complex; meteorological factors and air pollution potential; meteorological aspects of air pollution. S/U or letter grading.

263A. Physics of Environmental Transport. (4) Lecture, four hours; outside study, eight hours. Designed for graduate students. Transport processes in surface water, groundwater, and atmosphere. Emphasis on exchange processes across phase boundaries: sediment/water interface; air/water gas exchange; particles, droplets, and bubbles; small-scale dispersion and mixing; effect of reactions on transport; linkages between physical, chemical, and biological processes. Letter grading.

263B. Advanced Topics in Transport at Environmental Interfaces. (4) Lecture, four hours; outside study, eight hours. Requisite: course 253A. In-depth treatment of transport phenomena at environmental interfaces between solid, fluid, and gas phases, such as aquatic sediments, porous aggregates, and vegetative canopies. Discussion of mathematical models and experimental observations. Application to important environmental engineering problems. Letter grading.

265A. Mass Transfer in Environmental Systems. (4) Lecture, four hours; computer applications, two hours; outside study, eight hours. Designed for graduate environmental engineering program students. Physical chemistry and 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.


267. Environmental Applications of Geochemical Modeling. (4) Lecture, four hours; outside study, eight hours. Requisite: course 254A. Geochemical modeling is important tool for predicting environmental impacts of contamination. Hands-on experience in modeling using geochemical software packages 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 respiration. Research/modeling project required. Letter grading.

C282. Rigid and Flexible Pavements: Design, Materials, and Serviceability. (4) Lecture, four hours; discussion, two hours; outside study, six hours. Correlation, analysis, and metrization of aspects of pavement design, including materials selection and traffic loading and volume. Special attention to aspects of pavement distress/serviceability and factoring of these into metrics of pavement performance. Discussion of potential choices of pavement materials (i.e., asphalt and concrete) and their specific strengths and weaknesses in paving applications. Unification and correlation of different variables that influence pavement performance and highlight their relevance in pavement design. Concurrently scheduled with course C182. Letter grading.

286. 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.

297. 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.

298. 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 with topic change. Letter grading.

375. Teaching Apprentice Practicum. (1 to 4) Seminar, to be arranged. Preparation: apprentice personnel as teaching assistant, associate, or fellow. Teaching apprenticeship under active guidance and supervision of regular faculty member responsible for curriculum and instruction at UCLA. May be repeated for credit. S/U grading.

495. Teaching Assistant Training Seminar. (2) Seminar, two hours. Preparation: appointment as teaching assistant in Civil and Environmental Engineering Department. Seminar on communication of civil engineering principles, concepts, and methods; teaching assistant preparation, organization, and presentation of material, including use of visual aids; grading, advising, and rapport with students. S/U grading.

596. Directed Individual or Tutorial Studies. (2 to 8) Tutorial, to be arranged. Limit 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.

597A. 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.

597B. Preparation for Ph.D. Preliminary Examinations. (2 to 16) Tutorial, to be arranged. Limited to graduate civil engineering students. Reading and preparation for Ph.D. 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 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 students have been advanced to candidacy. S/U grading.
Classical Civilization major is to provide a for-

teaching in the Classics Department. These areas of study are

important in their own right and for their contribu-
tutions to the political, cultural, intellectual, and

artistic development of the Western world.

To this end, the department offers a wide vari-
yety of interdisciplinary courses in classical civi-

lization (multiple-listed in the Art History, Phi-

losophy, 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 trans-
lution (genres of epic, comedy, tragedy, biography), classical mythology, reli-
gion, law, gender and sexuality, politics, philos-

ophy, art and archaeology, and the reception of

the ancient world in modern cultures (cinema

and classics).

The department offers Bachelor of Arts de-
grees in Classical Civilization, in Greek, in

Latin, and in Greek and Latin and the Ph.D. de-
gree in Classics. Students can earn Master of

Arts degrees in Classics (Greek and Latin), in

Greek, or in Latin only after they have been ad-
mitted to the Ph.D. program.

Undergraduate Study

Students considering a major in the depart-
ment 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 iden-
tify and analyze ancient classical documents, material evidence, or other forms of primary
sources and demonstrate their critical skills by
engaging in presentations and weekly dis-
course with their peers.

Classical Civilization B.A.

Capstone Major

The civilizations of ancient Greece and Rome
have made important contributions to the po-

titical, social, artistic, and intellectual develop-
ment of the Western world. The purpose of the

Classical Civilization major is to provide a for-

mal and balanced introduction to the historical
and cultural experiences of the ancient Greeks
and Romans. The program of study is struc-
tured, yet not rigid. Lower division survey

courses and requirements in elementary lan-
guage study, ancient history, and classical art

establish an essential background of knowl-
edge, while electives encourage individual and

specialized interests. The program offers a broad range of courses in the fields of lan-
guage, literature, history, mythology, religion,

philosophy, art, and archaeology. The major

serves as excellent and rewarding preparation for a professional career in medicine, law, busi-

ness, journalism, communications, or the arts.

Preparation for the Major

Required: Classics 10, 20; Greek 3 or 16 or

Latin 3 or 16, and two courses from 30, 40W,

41W, 42, 51A, 51B, 60, 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 clas-

sical Greek culture course, one Roman civiliza-
tion course, and one course in Greek or Ro-

man literature in translation, classical mythol-

ogy, or classical archaeology.

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) Ten upper division courses in the
department (courses in related fields not of-
fered by the department may be substituted by
petition and with approval of the department
major and (2) one capstone seminar (Classics
191). All other courses in the 190 series may be
substituted only by petition.

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 related courses in civilization, culture, his-
tory, 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 Greek
courses, including course 110; Greek 197 and

199 may be applied only by petition; (2) three
upper division courses in classical civilization
and/or ancient history (History 112A through

Courses in related fields not offered by the de-
partment may be substituted by petition and
with approval of the faculty undergraduate ad-
viser; (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, his-
tory, 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

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

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

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

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

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

M112E, 113A, 113B, 114A, 114B, 114C, 115). Courses in related fields not offered by the department may be substituted by petition and with approval of the faculty undergraduate 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 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 archaeology, religion, mythology, philosophy, and cultural studies of ethnicity, gender, and sexuality in antiquity.

To enter the minor, students must have an overall grade-point average of 2.0 or better.

Required Lower Division Courses (15 units):
Classics 10, 20, and one course from 30, 40W, 41W, 42, 51A, 51B, 60.

Required Upper Division Courses (20 units):
Five upper division courses in classical civilization offered by the department. One course in a related field may be substituted with approval of the faculty undergraduate adviser. Classics 191 may be applied, but all other courses in the 190 series may be substituted only by petition.

A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor.

Each minor course must be taken for a letter grade, and students must have an overall grade-point average of 2.0 or better. 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.

A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor.

Each minor course must be taken for a letter grade, and students must have an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

Latin Minor

The Latin minor is designed to recognize a serious commitment to the study of the Latin language. After a year of elementary Latin (Latin 1, 2, 3) or its equivalent, students select departmental upper division reading courses in classical (and/or late antique and medieval) Latin prose and poetry that provide close analysis of individual texts, with attention to their historical, literary, and cultural context. Subjects of study include Roman comedy, epic, lyric, elegy, satire, history, rhetoric, philosophy, epistemology, and the novel.

To enter the minor, students must have an overall grade-point average of 2.0 or better.

Required Lower Division Courses (14 units):
Latin 2, 3, 20, or equivalent. Latin 16 may be substituted for Latin 2 and 3.

Required Upper Division Courses (20 units):
Five courses selected from Latin 100 through 133.

A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor.

Each minor course must be taken for a letter grade, and students must have an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website, http://grad.ucla.edu/gasaa/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 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.

Classes

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 legends of ancient Greece and/or Rome, role of those stories in their societies, and modern approaches to studying them. P/NP or letter grading.

40W. Reading Greek Literature: Writing Intensive. (5) Lecture, two hours; discussion, two hours. Enforced requisite: English Composition 3 or 3H or English as a Second Language 36. Exploration in detail and from variety of critical perspectives of carefully selected literary texts characteristic of ancient Greece and significant in Western literary tradition. Satisfies Writing II requirement. Letter grading.

41W. Reading Roman Literature: Writing-Intensive. (5) Lecture, two hours; discussion, two hours. Enforced requisite: English Composition 3 or 3H or English as a Second Language 36. Exploration in detail and from variety of critical perspectives of careful-
ly selected set of literary texts characteristic of ancient Rome and significant in Western literary tradition. Satisfaction in requirements: Letter grading.

42. Cinema and Ancient World. (5) Lecture/screening, five hours; discussion, seven hours. Use of popular culture and cinema to introduce students to ancient Greek and Roman culture; focus at discretion of instructor. P/NP or letter grading.

51A. Art and Archaeology of Ancient Greece. (5) Lecture, three hours; discussion, one hour. Survey of major period, theme, or medium of Greek art and archaeology at discretion of instructor. P/NP or letter grading.

51B. Art and Archaeology of Ancient Rome. (5) Lecture, three hours; discussion, seven minutes. Survey of major period, theme, or medium of Roman art and archaeology at discretion of instructor. P/NP or letter grading.

60. Fantastic Journey: Antiquity and Beyond. (5) Lecture, two and one-half hours; discussion, one hour. Investigation of phenomenon of fantastic or imaginary journey, from Homer’s Odyssey to Stanley Kubrick’s 2001: A Space Odyssey. Examination of ways in which travel to strange or new worlds is presented through the form of books (and occasionally films) across historical periods, with focus primarily on antiquity but also looking at how important motifs from ancient Greek and Roman travel narratives have endured to present day. Issues include cultural reception of space, what makes space either familiar or alien, rebuilding of home in fantastic territories, methods of traveling (both fantastic and mundane), methods of measuring time and distance across space, modern classifications of fantasy and science fiction, and to what extent these terms are applicable to ancient world. P/NP or letter grading.

87GE. General Education Seminar Sequences. (5) Seminar, three hours. Enforced requisite: course 20. Focused study of an aspect of ancient Greek or Roman culture or reception of classical tradition. Topics are interdisciplinary in nature (literature, arts, religion, politics, culture) and make connections between ancient and postclassical eras. P/NP or letter grading.

88A-88Z. Lower Division Seminars. (4 each) Seminar, three hours. Variable topics; consult Schedule of Classes or department for topics to be offered in specific term. P/NP or letter grading.

88GE. General Education Seminar Sequences. (5) Seminar, three hours. Enforced requisite: course 20. Focused study of one aspect of ancient Greek or Roman culture or reception of classical tradition. Topics are interdisciplinary in nature (literature, arts, religion, politics, culture) and make connections between ancient and postclassical eras. Topics include rediscovery of Pompeii and Herculaneum; Roman religion and literature; ancient Greek or Roman body; and 18th-century British literature and reception of classics. P/NP or letter grading.

Upper Division Courses

M114A. History of Ancient Mediterranean World. (4) (Same as History M112C.) Lecture, five hours. Intensive on-site study of history and culture of ancient Rome from founding of city to conversion of Christianity. Part of UCLA Summer Travel Program. P/NP or letter grading.

M114B. History and Monuments of Rome: Field Studies. (4) (Same as History M112E.) Fieldwork, five hours. Enforced corequisite: course M114A. Examination of history, art, and monuments of ancient Rome through on-site study of campus and field areas in modern and archaeological sites. Field trips outside Rome to Pompeii, Hadrian’s Villa, and ancient Ostia. Reception and ruins of Roman antiquity in medieval, Renaissance, and modern eras are explored in their historical context. Part of UCLA Summer Travel Program. P/NP or letter grading.

M121. History of Political Thought: Ancient and Medieval Political Theory from Plato to Machiavelii. (4) (Same as Philosophy M111A.) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Exposition and critical analysis of major political philosophers and schools from Plato to Machiavelii. 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 Western thought has conceived and reinterpreted ancient concepts of political thought, especially those of ancient Greek and Romans. Topics include influence of influential case(s) of modern reception of classical antiquity. P/NP or letter grading.

M125. Invention of Democracy. (5) (Same as Political Science M119B.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Democracy 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 proud of its power, “kratos.” It became only regime capable of including all members of community while disregarding wealth, status, and diverging interests. Examination of history and theory of ancient democracy. P/NP or letter grading.


140. Topics in History of Greek Literature. (4) Lecture, three hours. Requisite: course 10 or 40W. Investigation of specific issue in understanding of Greek literature, such as definition of one genre or evaluation of particular author. May be repeated for credit with topic change. P/NP or letter grading.

141. Topics in History of Latin Literature. (4) Lecture, three hours. Requisite: course 20 or 41W. Investigation of specific issue in interpretation of Latin literature, such as definition of one genre or evaluation of particular author. May be repeated for credit with topic change. P/NP or letter grading.

142. Ancient Epic. (4) Lecture, three hours. Requisite: course one from 10, 20, 30, 40W, or 41W. Homer’s Iliad and Odyssey, Vergil’s Aeneid, and Ovid’s Metamorphoses, studied in translation. P/NP or letter grading.

143A. Ancient Tragedy. (4) Lecture, three hours. Requisite: course one from 10, 20, 30, 40W, or 41W. Investigation of one problem in ancient culture that involves discussion of both Greek and Roman material. May be repeated for credit with topic change. P/NP or letter grading.

143B. Ancient Comedy. (4) Lecture, three hours. Requisite: course one of 10 or 20, 30, 40W, or 41W. Investigation of one problem in ancient culture that involves discussion of both Greek and Roman material. May be repeated for credit with topic change. P/NP or letter grading.

144. Topical Studies in Ancient Culture. (4) Lecture, three hours. Requisite: course one of 10, 20, 30, 40W, or 41W. Investigation of one problem in ancient culture that involves discussion of both Greek and Roman material. May be repeated for credit with topic change. P/NP or letter grading.

145A. Ancient Greek and Roman Philosophy. (4) (Same as Philosophy M103A.) 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 contexts. Lecture, three hours; discussion, one hour (when scheduled). Designed for seniors. May be repeated for credit with topic change. P/NP or letter grading.

145B. Late Ancient Greek Philosophy. (4) (Same as Philosophy M103B.) Lecture, three hours. Requisite: course one of M145A, Philosophy 101, 100A, 101B, or 101B. Study of some major texts in Greek philosophy of Hellenistic and Roman periods. Readings vary and include works by Stoics, skeptics, philosophers of science, Neoplatonists, etc. P/NP or letter grading.

146A. Plato — Earlier Dialogues. (4) (Same as Philosophy M101A.) Lecture, three hours; discussion, one hour. Preparation: one philosophy course. Study of selected selected earlier dialogues of Plato. P/NP or letter grading.

146B. Plato — Later Dialogues. (4) (Same as Philosophy M101B.) Lecture, three hours; discussion, one hour. Preparation: course M146A. Study of selected topics in middle and later dialogues of Plato. P/NP or letter grading.

M147. Aristotle. (4) (Same as Philosophy M102.) Lecture, three hours; discussion, one hour. Preparation: one philosophy course. Study of selected works of Aristotle. P/NP or letter grading.


150A. Female in Greek Literature and Culture. (4) Lecture, three hours. Requisite: course 10. Interdisciplinary study of concept of female in Greek 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 Roman literature and culture. P/NP or letter grading.

C151E. Archaeological Field Techniques. (12) Off-campus field archaeology, 36 hours. Preparation: at least one archaeological course. Concurrently scheduled with course C251E. P/NP or letter grading.

152A. Ancient City: Greek World. (4) Lecture, three hours. Enforced requisite: course one of 10 or 20, 30, or 40W. Survey of tragedy as it developed in Greek and Roman worlds. Part of UCLA Summer Travel Program. P/NP or letter grading.

152B. Ancient City: Roman World. (4) Lecture, three hours. Enforced requisite: course one of 20 or 51A or Art History 50 or History 1A. Range of interdisciplinary approaches to study of Athens and/or cities of Greek world, including Asia Minor, south Italy, and Sicily. Approaches, themes, and periods (both ancient city and receptions 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.

M153A. Minoan Art and Archaeology. (4) (Same as Art History 101M2B.) Lecture, three hours. Requisite: course one of 10 or 51A or Art History 50. Study of development of art and architecture in Minoan Crete from circa 3000 to 1000 B.C. P/NP or letter grading.

M153B. Mycenaean Art and Archaeology. (4) (Same as Art History 101M2B.) Lecture, three hours. Requisite: course one of 10 or 51A or Art History 50. Study of development of art and architecture in Mycenaean Greece from circa 2000 to 1000 B.C. P/NP or letter grading.

M153C. Archaic Greek Art and Archaeology. (4) (Same as Art History 101M2C.) Lecture, three hours. Requisite: course one of 10 or 51A or Art History 50. Study of development of art and architecture of Greek world from approximately 800 through 490 B.C. P/NP or letter grading.

M153D. Classical Greek Art and Archaeology. (4) (Same as Art History 101M2D.) Lecture, three hours. Requisite: course one of 10 or 51A or Art History 50. Study of development of art and architecture of Greek world from approximately 490 through 350 B.C. P/NP or letter grading.

M153E. Hellenistic Greek Art and Archaeology. (4) (Same as Art History 101M2E.) Lecture, three hours. Requisite: course one of 10 or 51A or Art History 50. Study of development of art and architecture of Greek world from middle of fourth century B.C., including transmittal of Greek art forms to Romans. P/NP or letter grading.
M153F. Etruscan Art. (4) (Same as Art History M102F) Lecture, three hours. Requisite: course 20 or 51B of History 50. Arts of Italic peninsula from circa 1000 B.C. to end of Roman Republic. P/NP or letter grading.

M153G. Roman Art and Archaeology. (4) (Same as Art History M102G) Lecture, three hours. Requisite: course 20 or 51B of History 50. Art and architecture of Rome and its Empire from circa 300 B.C. to A.D. 300. P/NP or letter grading.

M153H. Late Roman Art. (4) (Same as Art History M102H) Lecture, three hours. Requisite: course 20 or 51B of History 50. Art of Roman Empire from 2nd through 4th century (A.D.). P/NP or letter grading.

M153J-M153K. Classical Archaeology. (4-4-4) (Same as Art History M102I-M102J-M102K) Lecture, three hours. Requisite: one course from 10, 20, 51A, 51B, Art History 50, or History 1A. Knowledge of Greek and Latin not required. General introduction to study of Aegean, Greek, and Roman architecture, sculpture, and painting. May be repeated for credit with department consent. P/NP or letter grading.

M153L. Greco-Roman Architecture; M153J. Greco-Roman Sculpture; M153K. Greco-Roman Painting.

153M. Greeks and Romans on Bay of Naples. (4) Lecture, three hours; fieldwork, 21 hours. Recommended preparation: one 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, in particular from first settlement and colonization by Greeks in 8th century B.C.E. to destruction of Roman towns of Pompeii and Herculanum in 1st century C.E. Daily lectures and site visits. Field trips to Naples, Cumae, Paestum, Pompeii, Herculanum, Capri, Oplontis, and Boscoreale. 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 and extent of Roman poet's influence on subsequent literature, art, and film. Close analysis of Ovid's seminal text before turning to poem's classical, medieval, Renaissance, and imitators, from Ovid 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.


167. 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. Useful means practiced in ancient world at large. Coverage of beliefs in supernatural forces, rites aimed at controlling these forces effectively, and character and social roles of ritual experts in various cultures of ancient world. Source material includes types of magical spells, literary texts about magic and magicians, and artifacts such as amulets and ritual implements. P/NP or letter grading.

168. Comparative Mythology. (4) Lecture, three hours. Requisites: course 30, or GE Clusters 30A, 30B, and 30CW. Religious, mythological, and/or historical traditions of Greece and Rome compared with each other and to other traditions worldwide. P/NP or letter grading.

169. Sex in Ancient World. (4) Lecture, three hours. Requisite: course 10 or 20 or History 1A. Exploration of sex and gender systems of Greek and Roman cultures and their modern counterparts. What Greek and Roman sex/gender systems were, how they changed over time, and difference it makes. Readings include both modern theories about sex and history as foundation for interpretation of ancient texts in translation. P/NP or letter grading.

170C. Power and Imagination in Byzantium. (4) (Same as History M116C) Lecture, three hours; discussion, one hour (when scheduled). Requisites: History 116A, 116B. Introduction to power of emperor in Byzantine Empire. Topics include criticism of emperor; Iconoclasm, intellectual freedom, attempts at reform. Letter grading.

180. Introduction to Classical Linguistics. (4) Lecture, three hours. Requisite: Greek 3 or Latin 3. Linguistic approach to Greek and Latin, including Indo-European etymology; pronunciation, vocabulary, application to classical literature. P/NP or letter grading.

185. Origins and Nature of English Vocabulary. (5) Lecture, three hours; seminar on important themes, periods, genres of language, spelling, semantic change and word formation. S/U or letter grading.

190. Research Colloquia in Classics. (1) Seminar, one hour. Limited to juniors/seniors. Designed to bring together students undertaking supervised tutorial research in seminar setting with one or more faculty members to discuss their own work or related work in discipline. Led by one supervising faculty member. May be repeated for credit. P/NP grading.


197. Individual Studies in Classics. (2 to 4) Seminar, three hours. Limited to junior/senior departmental honors program students. May be repeated for credit. P/NP grading.


199. Directed Research in Classics. (2 to 4) Tutorial, two hours. Limited to juniors/seniors. Supervised individual research or investigation under guidance of faculty mentor. Culminating paper or project required. May be repeated for credit. Individual contract required. P/NP or letter grading.

Graduate Courses


201B. Topics in Ancient History: Roman World. (2 or 4) Seminar, three hours. Introduction to basic methods and approaches to study of Roman history by intensive examination of selected topics, including readings of ancient texts and modern scholarship. S/U or letter grading.

M216. Paleography of Latin and Vernacular Manuscripts, 900 to 1500. (4) (Same as English M215, French M210, and History M218) Lecture, three hours; discussion, two hours. Introduction to history of Latin and vernacular manuscript book from 900 to 1500 to (1) train students to make informed judgments about a specific 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.

220A. Interfaces: Transmission of Roman Literature. (Formerly numbered M220A) Lecture, three hours. Examination of transmission of Latin classical literature in late antiquity, Middle Ages, and Renaissance to understand processes by which Latin literature has been preserved. S/U 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 and 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 — Aegean 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 Sculpture. (4) Seminar, three hours, S/U or letter grading.

251D. Seminar: Classical Archaeology — Greco-Roman Sculpture. (4) Seminar, three hours, S/U or letter grading.

251E. Seminar: Classical Archaeology — Greco-Roman Painting. (2 or 4) Seminar, three hours. Study in style and iconography of various periods of Aegean, Greek, and Roman painting. May be repeated for credit with consent of instructor. S/U or letter grading.

C251E. Archaeological Field Techniques. (12) Off-campus field archaeology, 36 hours. Preparation: at least one archaeological course. Training in

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Greek

Lower Division Courses

1. Elementary Greek. (5) Lecture, three hours; discussion, two hours. P/NP or letter grading.
2. Elementary Greek. (5) Lecture, three hours; discussion, two hours. Enforced requisite: course 1. P/NP or letter grading.
3. Elementary Greek. (5) Lecture, three hours; discussion, two hours. Enforced requisite: course 2. P/NP or letter grading.

8A-8B-8C. Elementary Modern Greek. (4-4-4) (Formerly numbered 8) Lecture, three hours. Course 8A is enforced requisite to 8B. Lecture, three hours. Course 8A is enforced requisite to 8C. Introductory modern Greek sequence, with emphasis on spoken modern Greek. P/NP or letter grading.
9A-9B-9C. Intermediate Modern Greek. (4-4-4) Lecture, three hours; discussion, one hour. Course 9A is enforced requisite to 9B, which is enforced requisite to 9C. Intermediate-level program in modern Greek language study from communicative and task-based approach. Continued development of student understanding and use of Greek syntax and morphology through oral and written activities, reading, and listening. Students master basic communication skills, vocabularies, and everyday real-life situations, comprehend simple passages, announcements, and advertisements, master basic rules of modern Greek grammar and syntax, read fluently, and write accurately. P/NP or letter grading.

10. Elementary Modern Greek. (12) Lecture, 18 to 19 hours. Eight-week intensive introduction to principles of speaking, reading, and writing modern (de)lectic Greek. Offered in summer only. P/NP or letter grading.
11. Advanced Modern Greek. (8) Lecture, three hours. Recommended background in 10 or equivalent to courses 1, 2, and 3. Offered in summer only. P/NP or letter grading.
12. Intermediate Modern Greek. (4) Lecture, three hours; discussion, one hour (when scheduled). Requisite: course 3 or 16. Formal review of Greek grammar and syntax and development of skills in reading original texts of Greek prose. Readings are selected to introduce literature and culture of ancient Greece. P/NP or letter grading.

Upper Division Courses

100. Readings in Greek Prose. (4) Lecture, three to four hours. Enforced prerequisite: course 20. Selections from Plato and other classical Greek texts, along with grammatical review. P/NP or letter grading.
103. Aeschylus. (4) Lecture, three hours. Requisite: course 100. P/NP or letter grading.
104. Sophocles. (4) Lecture, three hours. Requisite: course 100. P/NP or letter grading.
107. Hisiod. (4) Lecture, three hours. Requisite: course 100. Reading of Theogony and excerpts from Works and Days, with emphasis on Hisiod’s place in Greek literature and his role in transmission of Greek mythology. P/NP or letter grading.
110. Study of Greek Prose. (4) Lecture, three to four hours. Requisite: course 100. Work in sight reading and grammatical analysis of Attic prose texts; writing Attic prose. P/NP or letter grading.
111. Herodotus. (4) Lecture, three hours. Requisite: course 100. P/NP or letter grading.
112. Thucydides. (4) Lecture, three hours. Requisite: course 100. P/NP or letter grading.
115. Xenophon. (4) Lecture, three hours. Requisite: course 100. P/NP or letter grading.
120. Plato: Republic. (4) Lecture, three hours. Requisite: course 100. P/NP or letter grading.

131. Readings in Later Greek. (4) Lecture, three hours. Requisite: course 100. Topics vary from year to year and include “Longinus.” On Sublime: Marcus Aurelius; Arrian; Second Sophistic; Plutarch; later epic; epigram; epistolography Graeci. P/NP or letter grading.
133. Readings in Byzantine Literature. (4) Lecture, three hours. Requisite: course 132. Topics vary from year to year and include Procopius, Agathias, Michael Psellus, Alexiad of Anna Comnena, and Digenis Akritas. P/NP or letter grading.
197. Individual Studies in Greek. (2 to 4) Tutorial, two hours. Limited to juniors/seniors. Individual intensive study, with scheduled meetings to be arranged between faculty member and student. Assigned reading and tangible evidence of mastery of subject matter required. May be repeated for credit. Individual contract required. P/NP or letter grading.
199. Directed Research in Greek. (2 to 4) Tutorial, two hours. Limited to juniors/seniors. Supervised individual research or investigation under guidance of faculty mentor. Culumnating paper or project required. May be repeated for credit. Individual contract required. P/NP or letter grading.

Graduate Courses

200A-200B-200C. History of Greek Literature. (4-4-4) Lecture, three hours. Lectures on history of Greek literature, supplemented by reading of Greek texts in original language. Each course may be taken independently for credit. S/U or letter grading.
201A-201B. Homer: Iliad. (2 or 4 each) Lecture, three hours. Course 201A is requisite to 201B. S/U (2-unit course) or letter (4-unit course) grading.
202A-202B. Homer: Odyssey and Epic Cycle. (2 or 4 each) Lecture, three hours. Course 202A is requisite to 202B. S/U (2-unit course) or letter (4-unit course) grading.
203. Hesiod. (2 or 4) Seminar, three hours. S/U (2-unit course) or letter (4-unit course) grading.
204. Homeric Hymns. (2 or 4) Seminar, three hours. S/U (2-unit course) or letter (4-unit course) grading.
205. Aeschylus. (2 or 4) Seminar, three hours. S/U (2-unit course) or letter (4-unit course) grading.
206A-206B. Sophocles. (2 or 4 each) Lecture, three hours. Course 206A is requisite to 206B. S/U (2-unit course) or letter (4-unit course) grading.
207A-207B. Euripides. (2 or 4 each) Lecture, three hours. Course 207A is requisite to 207B. S/U (2-unit course) or letter (4-unit course) grading.
208A-208B. Xenophon. (2 or 4 each) Lecture, three hours. Course 208A is requisite to 208B. S/U (2-unit course) or letter (4-unit course) grading.
209A-209B. Seminars: Hellenistic Poetry. (2 or 4 each) Seminar, three hours. S/U (2-unit course) or letter (4-unit course) grading.
211A-211B. Herodotus. (2 or 4 each) Lecture, three hours. Course 211A is requisite to 211B. S/U (2-unit course) or letter (4-unit course) grading.
212A-212B. Thucydides. (2 or 4 each) Lecture, three hours. Course 212A is requisite to 212B. S/U (2-unit course) or letter (4-unit course) grading.

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.

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.


Latin

Lower Division Courses

1. Elementary Latin. (5) Lecture, three hours; discussion, two hours. P/NP or letter grading.

1G. Elementary Latin for Graduate Students. (No credit) Lecture, eight hours. Concurrently scheduled with course 1. P/NP or letter grading.

2. Elementary Latin. (5) Lecture, three hours; discussion, two hours. Enforced requisite: course 1. P/NP or letter grading.


Upper Division Courses

100. Readings in Latin Prose and Poetry. (4) Lecture, three hours. Enforced requisite: course 20. Close study of prose text supplemented with related readings in poetry. Attention to historical and cultural context. Course is normally requisite to other courses in Latin 100 series. P/NP or letter grading.


103. Lucretus. (4) Lecture, three hours. Requisite: course 100. P/NP or letter grading.

104. Ovid. (4) Lecture, three hours. Requisite: course 100. P/NP or letter grading.

105A. Beginning Vergil: Selections from Aeneid I-VI. (4) Lecture, three hours. Requisite: course 100. Reading of one or more books from first half of Aeneid, designed especially for students with only limited experience in reading Latin poetry. May be repeated for credit with change in readings. P/NP or letter grading.

105B. Advanced Vergil. (4) Lecture, three hours. Requisite: course 105A. Reading and discussion of Vergil's Eclogues, Georgics, and/or second half of Aeneid. May be repeated for credit with change in readings. P/NP or letter grading.


109. Roman Satire. (4) Lecture, three hours. Requisite: course 100. Readings from author(s) of Roman satire, including Horace, Persius, and Juvenal, or related satirical texts. 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. Roman Novel. (4) Lecture, three hours. Requisite: course 100. Reading and discussion of either Petronius’ Satyricon or Auleius’ Metamorphoses and development of genre of prose novel in antiquity. May be repeated for credit with change in author and text. P/NP or letter grading.

117. Sallust. (4) Lecture, three hours. Requisite: course 100. P/NP or letter grading.

118. Seneca. (4) Lecture, three hours. Requisite: course 100. Selection of Seneca’s works read in Latin. P/NP or letter grading.

119. Readings in Roman Prose. (4) Lecture, three hours. Requisite: course 100. Readings of selected Roman prose author(s). Topics may vary from year to year and may be organized in terms of chronology (Republican or imperial), literary genre (Roman biography, antiquarian learning, or science), and/or theme. May be repeated for credit with topic change. P/NP or letter grading.

119. Readings in Roman Poetry. (4) Lecture, three hours. Requisite: course 100. Readings of selected Roman poet author(s). Topics may vary from year to year and may be organized in terms of chronology (Republican or imperial), epic, lyric, elegy, and/or theme. May be repeated for credit with topic change. P/NP or letter grading.

120. Vulgate. (4) Lecture, three hours. Requisite: course 100. Reading and discussion of one or more Latin patristic texts (especially works of Ambrose, Augustine, and/or Jerome), with emphasis on specific features of patristic, as opposed to classical, Latin, P/NP or letter grading.


197. Individual Studies in Latin. (2 to 4) Tutorial, two hours. Limited to juniors/seniors. Individual intensive study, 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.

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 Catullian 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.

205A. Seminar: Vergil’s Bucolics. (2 or 4) Seminar, three hours. S/U (2-unit course) or letter (4-unit course) grading.

205B. Seminar: Vergil’s Georgics. (2 or 4) Seminar, three hours. Course 205A is not requisite to 205B. Close reading of Vergil’s text; careful evaluation of 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/U (2-unit course) or letter (4-unit course) grading.

207. Roman Comedy. (2 or 4) Seminar, three hours. Survey of history of Roman comedy. S/U (2-unit course) or letter (4-unit course) grading.

208. Ovid. (2 or 4) Seminar, three hours. S/U (2-unit course) or letter (4-unit course) grading.

209. Seminar: Roman Satire. (2 or 4) Seminar, three hours. Detailed study of one individual satirist, with attention to his position in development of satirical genre in Roman literature. Choice of author varies from year to year. Close study of text, of characteristics of writer as social critic and artist, and of contemporary literary and social environment. S/U (2-unit course) or letter (4-unit course) grading.


211A-211B-211C. Seminars: Roman Historians. (2 or 4 each) Seminar, three hours. Study of considerable portions of writings of following historians. Each course may be taken independently for credit, S/U (2-unit course) or letter (4-unit course) grading. 211A. Sallust; 211B. Livy; 211C. Tacitus.

214. Ancient Biography: Roman Lives. (2 or 4) Seminar, three hours. Study of biography in ancient Rome. Literary survey or focused readings on lives of Cornelius Nepos, Suetonius, Tacitus, or imperial chroniclers of 4th century C.E. S/U (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 with topic change. S/U (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 Susoriae, Quintilian’s Institutio), with attention to its place in rhetorical tradition. May be repeated for credit with topic change. S/U (2-unit course) or letter (4-unit course) grading.

217. Cicero’s Orations. (2 or 4) Seminar, three hours. S/U (2-unit course) or letter (4-unit course) grading.

218A. Cicero’s Philosophical Works. (2 or 4) Lecture, three hours. S/U (2-unit course) or letter (4-unit course) grading.

219A. Seminar: Roman Stoicism. (2 or 4) Seminar, three hours. S/U (2-unit course) or letter (4-unit course) grading.

223. Lucretius. (2 or 4) Lecture, three hours. S/U (2-unit course) or letter (4-unit course) grading.

224. Seneca. (2 or 4) Seminar, three hours. Detailed study of one work of prose or poetry by younger Seneca. May be repeated for credit with topic change. S/U (2-unit course) or letter (4-unit course) grading.

229. Sight Translation. (2, 4) 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 distinct genres, literary versus scholarly translation, semantic properties 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/U (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 early 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 manuscripts until its emergence in Romance languages. S/U or letter grading.


403. Directed Individual Study or Research. (1 to 6) Tutorial, to be arranged. S/U grading.

404. Study for M.A. Comprehensive Examination or Ph.D. Qualifying Examinations. (2 to 8) Tutorial, to be arranged. S/U grading.
Undergraduate Study

Communication Study B.A.

Students fulfilling the major in Communication Studies must complete the seven required lower division courses and a minimum of 11 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 5 or Political Science 30.

Transfer Students

Transfer applicants to the Communication Studies major with 90 or more units must complete at least four 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 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_transfer.htm for up-to-date information regarding transfer selection for admission.

The Major

Students must complete 11 upper division courses as follows:

Required Core Courses: Communication Studies 100, 150.

Required Area Courses: A total of eight courses from the following four areas, including at least one core course in each area:


Required Practicum Course: One course from Communication Studies 102, 103A, 103B, 104, 111, 116, M117, 139, 160, or M176.

Honors Program

The departmental 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 grade of C– or better 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 have completed the requirements for 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.

2. 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 impromptu speaking. Critical analysis of speeches in both contemporary and historical settings. Special emphasis on group discussions, evaluations, practice of both public and private speaking skills. Offered in summer only. P/NP or letter grading.

3. 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.

4. 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 organization or individual in American media. Participation in pitch presentations of movie or television program of students’ own design. Offered in summer only. P/NP or letter grading.

5. 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.

6. Production of Multimedia Software. (4) Lecture, three hours; laboratory, one hour. Description of what goes into multimedia software program; discussions of different platforms (PC, Mac, network computers, servers, and transmitters) and distribution means (CD-ROM, DVD-ROM, Internet), content organization and layout, data structure and management; and overall planning for prototype and final product. P/NP or letter grading.

7. 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.

8. 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

1. Communication Theory. (4) Lecture, four hours. Requisites: courses 10 or Linguistics 1 or Sociology 10. Analysis of fundamental nature of human communication; its physical, linguistic, psychological, and sociological bases. Study of theoretical models explicating language and communicative elements of communicative act. P/NP or letter grading.

2. Freedom of Communication. (4) Lecture, four hours. Analysis of legal, political, and philosophical issues entailed in rights of free expression, access to information, and access to audience. Study of court decisions governing freedom of communication in U.S. P/NP or letter grading.

103A-103B. Forensics. (4-4) Lecture, three hours. Participation in on-campus and intercollegiate forensics activities. Preparation 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. P/NP or letter grading. 103A. Basic preparation; 103B. Advanced practicum in speech.

104. Analysis and Briefing. (4) Lecture, three hours. Intensive study of selected political or social issues, preparation of bibliography, analysis and evaluation of issues and arguments. P/NP or letter grading.

110. Gender and Communication. (4) Lecture, four hours. Understanding gender is fundamental part of understanding who we are as human beings. Exploration of crucial role of gender in spheres of life involving communication and role and origins of gender differences in communication. Contexts of communication include family, workplace, sexuality, and intimate relationships. How media influence conceptions of gender. P/NP or letter grading.

111. Conflict and Communication. (4) Seminar, three hours. Analysis of when and why conflict is prevalent in everyday social interaction. 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 Issues in Vocal Communication. (4) Seminar, three hours. Requisite: course 118 or 120 or 126. Examination of the history of human communication with emphasis on nonverbal behavior; development of sex-differentiated language cross-culturally; sex bias in lexicon and usage; coevolution of signaler and receiver adaptations, nonverbal behavior; development of sex-differentiated language in various racial/ethnic/class/sexual preference groups. P/NP or letter grading.

M113. Nonverbal Communication and Body Language. (4) Formerly numbered 113.) (Same as Psychology M137B.) Lecture, three hours. Examination of how various forms of nonverbal communication convey meanings and social interaction with emphasis on both production and perception of multiple communication formats (e.g., affect expression of face and body gestures). Nonverbal communication with strong emphasis on body language. Readings from a variety of related fields. P/NP or letter grading.

114. Understanding Relationships. (4) Lecture, four hours. Explanation of types of communication that occur in explicitly romantic relationships. In-depth coverage of various 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. (4) 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 that count in their lives. Setting and analyzing goals, planning a strategy, negotiating and resolving conflict between parties. Letter grading.

118. Language and Music. (4) Lecture, three hours. Cognitive science exploration of structure and evolution 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 use this information 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 negotiation. Focus on behavior of individuals and teams in organizational communication concerns theories (explanations) of the coevolution of signaler and receiver adaptations, nonverbal communication, and public sphere. Primary focus on 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, four hours. Examination of issues related to management of conflict between major areas of world, with focus on cultural background, perception gaps, and political context. Communication approaches 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 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 and audible action recorded 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.

124. Psychology of Language and Gender. (4) (Formerly numbered M124.) Lecture, three hours. Examination of current topics at intersection of gender and language. Topics include sex differentiation in language across-culturally; sex bias in lexicon and usage; sex differences in lexicon, syntax, phonology, and nonverbal behavior; development 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 Socioinstitutional Interaction. (4) (Same as Sociology CM125.) Lecture, four hours; discussion, one hour. 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 signaler and receiver adaptations, nonverbal communication, courtship behavior, miscommunication between species, implicit language use, and deception. Letter grading.


128. Play and Entertainment. (4) Lecture, three hours. Entertainment is significant component of both interpersonal and mass communication. Examination of evolutionary history, cognitive mechanisms, and social functions of play and entertainment, as well as their possible psychological effects. Letter grading.

129. Gaining Mind. (4) Lecture, three hours. Exploration of various aspects of online computer games that are becoming increasingly popular and technically sophisticated, with focus on what people learn from games, how they learn it, and whether learning is potentially useful. Letter grading.

130. Cultural Factors in Interpersonal Communication. (4) Lecture, three hours. How cultural factors as they affect quality and processes of interpersonal communication; exercises in participation, analysis, and criticism of interethnic and intercultural communication. P/NP or 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. Cultural evaluation of television in terms of existing and scholarly research of new developments in television. Application of research findings by students to real-world contexts in course discussions, papers, and presentations. Letter grading.

133. Decoding Media Strategies. (4) Lecture, three hours. Today’s mass media are thriving business, central part of cultural identity, and vital component of democracy. How do these different and often conflicting functions determine content of mass media? Examination of psychological dynamics of advertising, nature of entertainment and mass culture, practice of propaganda, and changing patterns of media ownership and production. Assessment of impact of mass media on individuals and social institutions. Letter grading.

134. Organizational Communication. (4) Lecture, three hours. Introduction to issues and literature related to communication within organizations. Organizational communication concerns theories (explanations) of organized behavior, conceptions of organizations, study of bureaucracy and its alternatives, metaphors for organizational communication, power, conflict, and strategic communication in organizations. Focus on behavior of individuals and teams within organizations. Letter grading.

M135. Narrative as Mass Communication. (6) (Same as Honors College M135.) 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.

136. Media Portrayals of Gays and Lesbians. (4) Lecture, four hours. How gay and lesbian characters have been portrayed by media, with particular focus on how gays and lesbians have been negatively stereotyped, portrayed, and often not portrayed at all. Exploration not of how gays and lesbians have been represented, but also why certain portrayals have tended to dominate. P/NP or letter grading.
142. Communicating Diversity in Organizations. (4) Lecture, three hours. Knowledge, skills, and abilities needed for students to understand and address various components of diversity in organizations, with emphasis on areas related to personnel, ethics, policies, initiatives, staff needs, staff development, and social interactions. Students learn to think critically about policies and practices of organizations. Examination of how films communicate to large audiences about history, society, and politics. Critical evaluation of these works to understand power and limitations of films as social persuasion. Letter grading.

143. Rhetoric of Popular Culture. (4) Lecture, three hours. Rhetorical approach to study of U.S. popular culture. Examination, both at theoretical level and through specific case studies, of ways in which popular cultural texts perform rhetorically to influence political and social struggles shaping everyday life. How do particular artifacts or communicative texts constitute source for (re)negotiation of cultural meanings as well as greater understanding of ways language functions as vehicle for human action. Letter grading.

144A-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 discourse structures and expanded expansions. M144B. Requisite: course M144A. Consideration of some more expanded sequence structures, story structures, topical sequences, and overall structural features, as well as single conversations.

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 gender, and age and ability. 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 social organizations. Letter grading.

147. Sociology of Mass Communication. (4) (Same as Sociology M176.) Lecture, four hours; discussion, one hour (when scheduled). Studies in relationship between mass communication and social organization. Topics include history and organization of major media institutions, social forces that shape production of mass media news and entertainment, selected studies in media content, and effects of media on society. P/NP or letter grading.


149. Media, Power, and Sexuality. (5) (Same as Gender Studies M149 and Labor and Workforce Studies M149.) Lecture, four hours; activity, one hour. Limited to junior/senior Communication Studies majors. Investigation of role of mass media and social networking in American political process. P/NP or letter grading.

150. Methodologies in Communication Research. (4) Lecture, four hours; discussion, one hour. Requisites: Statistics 10 or 11, and 12, Limited to Communication Studies majors. Critical studies of quantitative and qualitative methodologies in communication research. Letter grading.

151. Communication and Social Organization. (4) Lecture, four hours. Examination of how computer technology, particularly Internet, has influenced patterns of human communication. History and distinctiveness of computer-mediated communication (CMC), CMC’s influence on human communication, political, and social interaction. Letter grading.


153. Media and Aggression against Women. (4) (Same as Gender Studies M153.) Lecture, three hours. Social scientific study of intersection between mass media and men’s aggression against women. Particular consideration of sexual aggression, pornography, and characteristics of aggressive men. Analysis of interaction between nature and nurture. Letter grading.

154. Social Communication and New Technology. (4) Lecture, four hours. Internet’s digital core was designed for military command. Yet emerging network was quickly adapted to communicative functions such as gossip, dating, news, entertainment, and trade. 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, YouTube) through social network analysis and other social science research methods. P/NP or letter grading.

157. Celebrity, Fame, and Social Media. (4) Lecture, three hours. Analysis of how following personal lives of media-created celebrities impacts self-esteem, connectedness, and personal relationships from cultural studies and social sciences perspectives, and how entities cultivate celebrity for financial gain. Topics include celebrity gossip and privacy, news sharing, public relations, and impact of social media on fan support, image construction, and damage control. P/NP or letter grading.

158. Revolutions in Communication Technology. (4) Lecture, four hours. Study of role assigned to technology in theories of communication. Examination of contemporary and historical communications with in established political institutions; state papers; deliberative discourses; electoral campaigns. Letter grading.

159. Photography and Evolution of Visual Language. (Same as Gender Studies M159.) Lecture, three hours. Discussion of theories and research on why photography exists and its effects. Use of topic to illustrate evolution of theoretical viewpoint 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 with in established political institutions; state papers; deliberative discourses; electoral campaigns. Letter grading.

161. Electoral Politics: Mass Media and Elections. (4) (Same as Political Science M141D.) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Assessment of manner in which Americans’ political beliefs, choices, and actions are influenced by mass media presentations, particularly during election campaigns. Topics include processes of political attitude formation and mobilization; 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 presidential communication environment, resources, and strategies, as well as how presidential campaign communication has evolved over time and implications for how presidents govern. Letter grading.


164. Entertainment Law. (4) Lecture, three hours. Various issues in entertainment industry, with primary focus on business, law, and free speech-related concepts. P/NP or letter grading.

165. Agitational Communication. (4) (Formerly numbered 165.) (Same as Labor and Workplace Studies M165.) Lecture, four hours; discussion, one hour (when scheduled). Theory of agitation; agitation as force for change in existing institutions and policies in democratic society. Intensive study of selected agitational movements and social conflicts and content of their communications. Letter grading.
166. Communicative Dynamics in Film and Television Production (4). Lecture, four hours; laboratory, one hour. The role of mass media in providing access to entertainment, news, and public discourse. Topics include the use of mass media in mass communication. Letter grading.

167. Sex, Politics, and Race: Free Speech on Campus. (4). Lecture, three hours. Focus on concept of freedom of expression at the university, with special emphasis on postsecondary education. How First Amendment, case law, and federal and state statutes affect students’ and teachers’ abilities to speak on and off campus. Discussion of classroom and campus speech codes, campus demonstrations, student publications, student conduct regulations, and restrictions on displays of art and academic freedom. P/NP or letter grading.

168. Free Speech in Advertising. (4). Lecture, three hours. Exploration of First Amendment and commercial speech within context of product and service advertising (e.g., vice products such as tobacco, alcohol, illegal drugs, gambling; pharmaceutical drugs; and political advertisements). Examination of when, where, and how (time/place/manner) restrictions imposed on advertising and commercial speech, with specific reference to shopping malls, news tabloid racks, and billboards, among other places. P/NP or letter grading.

M169. Critical Vision: History of Art as Social and Political Commentary. (5) (Same as Honors Collegium M179.) Lecture, four hours. Study of traditions and visual arts (painting, graphic art, photography, sculpture) as vehicles for social and political commentary. P/NP or letter grading.


171. Theories of Freedom of Speech and Press. (4). Lecture, three hours. Exploration of relationship between freedoms of speech and press and values of liberty, self-realization, self-government, truth, dignity, respect, justice, equality, association, and community. Study of significance of these values examined in connection with issues such as obscenity, defamation, access, media, and control of commercial, corporate, and government speech. P/NP or letter grading.

M172. Free Speech in Workplace. (4) (Formerly numbered 172.) (Same as Labor and Workplace Studies M172.) Lecture, four 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 between 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 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 trial system as communication process. Examination of impact of courtroom television, paid jury consultants, and celebrity prosecutions on system’s communication dynamics and search for truth. Review of communication-based legal data in effort to decide whether American jury system places too much emphasis on winning and not enough on seeking truth. Letter grading.

175. Criticism and Mass 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, analogue, 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, and problems in the development of criticism. P/NP or letter grading.

176. Visual Communication and Social Advocacy. (4) (Formerly numbered 176.) (Same as Labor and Workplace Studies M176.) Lecture, four hours. Visual communication reaches diverse audiences in communities through posters, banners, billboards, murals, and documenta photography. Impact of this type of visual communication has had powerful world impact. Survey of all four genres of visual communications as features of modern mass media. Letter grading.


179. Images of U.S. (4). Lecture, four hours. Awareness of international consciousness of understanding of way our nation is perceived by others. Exploration of roots of U.S. images in minds of people abroad. Analysis of influences that contribute to images and ways in which images affect practical matters, P/NP or 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 attempts to influence behavior 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.


182. Media and Mind. (4). Lecture, three hours. Investigation of news persuasion and entertainment appeal through three intersecting approaches: study of cognitive and neurological brain processes, focused attention on personal sensory and imagined experiences, and hands-on media analysis. Topics include perception and imagination in television news, narrative, advertising, and commercial words and play as implicit learning. Students collaborate with each other to assemble variety of media critiques of recent international and domestic news events. P/NP or letter grading.

185. Field Studies in Communication. (2 to 4) Lecture, two hours. Designed for juniors/seniors. Fieldwork in communication. Students participate in two-hour seminar sessions and spend seven hours in approved community settings each week for each 2 units of credit. May be taken for maximum of 4 units per term. P/NP grading.

186. Mass Media, Public Opinion, and Foreign Policy. (4). Lecture, four hours. Examination of various means through which mass media and public opinion influence foreign policy. Development of coherent view of interaction between media, public opinion, and politicians with respect to foreign affairs. Letter grading.

187. Ethical and Policy Issues in Institutions of Mass Communication. (4). Lecture, three hours. Intensive examination of ethical and policy issues arising in mass communication areas (e.g., film, broadcasting, and new technologies) and societal institutions (Congress, federal agencies, courts, Presidency, schools, churches, political action groups, advertisers, and audiences). P/NP or letter grading.

188. Variable Topics in Mass Communication and Media Institutions. (4). Lecture, four 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.

189. Variable Topics in Interpersonal Communication. (4). 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.

190. Variable Topics in Communication Technology and Digital Systems. (4). Lecture, four hours. Variable topics; 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.

191A. Variable Topics Research Seminars: Communication and Media Institutions. (4). Seminar, three hours. Research seminars on selected topics in communication technology and digital systems. 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.

191C. Variable Topics Research Seminars: Communication Technology and Digital Systems. (4) Seminar, three hours. Research seminars on selected topics in communication technology and digital systems. Reading, discussion, and development of culminating project. May be repeated for credit with topic change. P/NP or letter grading.

191D. Variable Topics Research Seminars: Political and Legal Communication. (4) Seminar, three hours. Research seminars on selected topics in political and legal 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 to 4) Tutorial, one hour. Limited to juniors/seniors. Intensive study of selected topics in communication and communication technology. May 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.

195. Individual Studies in Communication Studies. (2 to 4) Tutorial, one hour. Limited to juniors/seniors. Intensive study of specified 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. Letter grading.

196A-198B-198C. 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. 196A. Requisite: 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. Completion 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. 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.
COMMUNITY HEALTH SCIENCES

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Joel D. Kopple, M.D., in Residence
Donald E. Morrisky, Sc.D., M.P.H., Sc.M.
Anne R. Pelayo, Ph.D. (Fred H. Bixby Professor of Population Policy)
Michael G. Ross, M.D., M.P.H.
Mary Jane Rotheram-Borus, Ph.D., M.P.H.

Associate Professors
Osmun M. Galal, M.D., Ph.D.
Isabellle F. Hunt, Dr.P.H., R.D.
Sneheendriya B. Kar, Dr.P.H., M.Sc.
Virginia C. Li, Ph.D., M.P.H.
Alfred K. Neumann, M.D., M.A., M.P.H., F.A.B.P.M.
Charlotte G. Neumann, M.D., M.P.H.
Marian E. Swendsen, Ph.D.

Assistant Professors
Chandra L. Ford, Ph.D.
Jessica D. Gipson, Ph.D., M.P.H.
Onnida S. von Eherestein, Ph.D., M.P.H., M.S.

Lecturers
Halle M. Aten, Ph.D.
Tiffani Brown Garnett, M.P.H.
Nikita Gupta, M.P.H.
Martine U. Hall, M.S., M.P.S.
Katherine R. Jakle, Psy.D.
Susan D. Kirby, Dr.P.H., M.P.H.
Eve R. Lahijani, M.S., R.D.
Vanessa Luke, M.A.
Gia Marson, Ed.D.
Kristen J. McKinney, Ph.D.
Rena Orenstein, M.P.H.
Bonnie Taub, Ph.D.
Minh C. Tran, Ph.D., M.S.
Joanne Valli-Meredith, Ph.D.
Pablo J. Velasco, M.A.

Adjunct Professors
Diana M. Bontà, Dr.P.H., R.N.
Elizabeth D’Amico, Ph.D.
Daniel H. Ershoff, Dr.P.H.
Ronald J. Halbert, M.D.
Michael L. Prepel, D.P.A., M.P.H., C.H.E.S.

Steven J. Rottman, M.D.
Samuel J. Stratton, M.D., M.P.H.

Adjunct Associate Professors
Marion Taylor Baer, Ph.D., R.D.
Linda Delp, M.P.H., Ph.D.
Helen M. Du Plessis, M.S., M.P.H.
Sheba M. George, Ph.D.
Wendelin M. Slusser, M.D., M.S.
Paula A. Tavrow, Ph.D.
M. Cristina Tirado, D.V.M., M.S., Ph.D.
Valentine M. Villa, Ph.D.

Adjunct Assistant Professors
Alina H. Dorian, Ph.D.
Janet C. Frank, Dr.P.H.
Daphna Gans, Ph.D.
Dena R. Herman, M.P.H., Ph.D., R.D.
Cathy M. Lang, Ph.D., M.P.H.

Field Program Supervisor
Michael L. Prepel, 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 structure. 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 a wide variety of professional (M.P.H. and Dr.P.H.) 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. Grantees 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://grad.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 Community Health Sciences offers Master of Science (M.S.) and Doctor of Philosophy (Ph.D.) degrees in Community Health Sciences and a Master of Public Health for Health Professionals (M.P.H.-HP) degree.

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 other’s perspectives, read and discuss relevant reading material, and explore their own and other groups’ experiences in various social and institutional contexts. Exploration of ways of taking action to create change and bridge differences at interpersonal and social/community levels. P/NP or letter grading.

80. FITTED: Fitness Improvement Training through Exercise and Diet. (1) Lecture, one hour; activity, two hours. Success in undergraduate experience is very much influenced by attributes beyond intellectual competence. Examination of personal, social, and environmental factors that influence college students’ eating behaviors, physical activity patterns, and body image. Development of individualized student plans for eating well, being active, and feeling good about their bodies. Learning of practical skills with application to nutrition, physical activity, positive body image, stress management, and other aspects of wellness as students participate in critical evaluation of popular diets, healthy body weights, fitness, supplements, media body ideals, and self-destructive thoughts. P/NP grading.

90. Aging Frontier: Public Health Perspective. (4) Lecture, three hours; discussion, one hour. Introduces 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, four hours. Limited to students in Public Health minor and graduate students. Introductory course to provide non-Community Health Sciences M.P.H. and qualified undergraduate students with broad and comprehensive overview of concepts, empirical research, and public health practice in community health sciences, with emphasis on social contact and determinants of population health and principles of planning interventions to protect and improve public health. Ways to define and measure health and ill health, social construction of illness, social and behavioral determinants of health, and health disparities, including socioeconomic status, race/ethnicity, gender, and age. Social and behavioral theories of health-related behavior change, health promotion strategies and methods, and public policy. Case studies of evidence-based health promotion programs provided. Letter grading.

130. Nutrition and Health. (4) Lecture, three hours; laboratory, one hour. Preparation: one biology course, one chemistry course. Basic and clinical nutrition theory and practice for students in health sciences curricula. P/NP or letter grading.

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: Myth or Model? (4) (Same as Asian American/ Pacific Islander Studies 246) Focus on public health issues relevant to Asian American/Pacific Islander communities. Examination of historical processes, health, and social determinants: health of immigrants populations. Letter grading.

160. Intergroup Dialogue: Theory and Practice of Peer Facilitation. (4) Lecture, four hours. Recommended requisite: course 160. Application and further development of content and skills learned in course 160. Co-facilitation of weekly dialogues on specific identity themes and further development of knowledge and techniques in areas of group dynamics, conflict intervention, communication and community, and mental health effects of structural inequality as they relate to discussions of social justice and multicultural issues. Readings in these areas and discussions of ongoing dialogue dynamics may be repeated once for credit. Letter grading.

CM170. Improving Worker Health: Social Movements, Policy Debates, and Public Health. (4) (Same as Labor and Workplace Studies CM170.) Lecture, three hours; fieldwork, two hours. Examination of intersection between work, health, and environment, analysis of labor and worker health issues through introduction to historical trends and social movements, interpretation of current policy debates, and development of innovative interventions. Concurrently scheduled with course CM100. Letter or P/NP grading.

179. Life Skills for College Students. (4) Seminar, four hours. Multidisciplinary exploration of student development in undergraduate experience, with focus on processes of identity formation and emotional and social development, on variables associated with gender, race, ethnicity, culture, and sexual orientation. Testing of real-life relevance of theory and research. P/NP or letter grading.

180. Field Studies in Cancer Control. (4) Lecture, two hours; discussion, two hours; fieldwork, four hours. Required: Molecular Cell, and Developmental Biology 50. Designed for juniors/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. 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 field-based academic/professional disciplines. Community-based service learning strategy used to enhance knowledge of concepts covered. As part of service portion, students become teammembers and committee members. Letter grading.

195. Community or Corporate Internships in Community Health Sciences. (4) Tutorial, six hours. Limited to juniors/seniors. Internship in supervised community health agency or business. Further supervision provided by public health organization for which students do internship. Students meet on regular basis with instructor and provide periodic reports of their experiences. May be repeated for credit. Individual contract with supervising placement sponsor required. P/NP or letter grading.

197. Individual Studies in Community Health Sciences. (2–6) Individually designed independent study, supervised by an assigned faculty member. Letter or P/NP 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. Demographic, environmental, risk factors, and social determinants, health and human rights, and access to healthcare and prevention services. Analysis of public policy across topics. Builds skills necessary to 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 semester of calculus. 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.

210. Community Health Sciences. (4) Lecture, three hours. Preparation: one semester of calculus. Basic concepts, relationships, and policy issues in field of community health, variability in definitions of health and illness, correlates of health and illness behaviors, impact of social and cultural factors on health of 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, three hours; discussion, one hour; outside assignments, eight hours. Course 211A is requisite to 211B. Development, planning, and administration of public health programs in community settings. Introduction to range of research methods and techniques used in designing and conducting health research, with particular emphasis on evaluation of community-based public health programs. Course organized into three modules. Letter grading. Requisite: Biostatistics 100B. Application of quantitative data or public use data. Letter grading.


M216. Qualitative Research Methodology. (4) (Same as Anthropology M284.) Discussion, three hours; laboratory, one hour. Intensive seminar/field course in qualitative research methodology. Emphasis on using qualitative methods and techniques in research and evaluation related to healthcare. Letter grading.

M218. Questionnaire Design and Administration. (4) (Same as Epidemiology M218.) Lecture, four hours. Requisites: courses 211A and 211B, or Epidemiology 200B and 200C. Design, testing, field use, and administration of data collection instruments, with particular emphasis on questionnaires. Letter grading.

219. Theory-Based Data Analysis. (4) Seminar, three hours. Required: Biostatistics 100A, 100B. Translation of analytic plan, its application to real data, and interpretation of results obtained through multivariate analysis. Analysis of quantitative data using range of multivariate techniques, such as linear and log-logistic regression. Analysis of theoretical problem using student quantitative data or public use data. Letter grading.

220. Racism and Public Health: Social Epidemiologic Approaches. (4) Seminar, three hours; discussion, one hour. Requisite: Biostatistics 100B. Integration of social epidemiologic methods and critical approach to study of racial stratification and public health focus on (1) consideration of social-relat ed 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 race-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 health and health-related behavior. Consideration of major status characteristics: social class, gender, and socioeconomic status. Description of sociocultural patterns and social meaning of those four characteristics. Letter grading.

M222. Understanding Fertility: Theories and Methods. (4) (Same as Sociology 112, Anthropology M216.) 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 proximate determinants. For advanced students interested in population, demography of health, and social demography. Letter grading.

M223. Tobacco: Prevention, Use, and Public Policy. (4) (Same as Health Policy and Management CM221.) Lecture, four hours. Designed for 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 intervention and cessation concepts, and tobacco control efforts in U.S., and international trends in tobacco use. Letter grading.

224. Social Determinants of Nutrition and Health. (4) Lecture, three hours; discussion, one hour. Preparation: 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 supporting relationship between socioeconomic disad-
vantage and food-related health conditions such as obesity, diabetes, and osteoporosis. Critical examination of models for what determines health disparities and consequent population migration. Principal focus on lower income settings and distributions to high-burden outcomes in childhood and reproductive health. Globalization, population movements, and demographic challenges. Letter grading.

M234. Obesity, Physical Activity, and Nutrition Seminar. (4) (Same as Health Policy and Management M244.) Seminar, three hours; discussion/lab, one hour. Designed for graduate students. Critical analysis of models for what determines health disparities and environmental injustice and their potential solutions. Do health disparities arise because minorities and low-income populations have less access to social and public health services? How does research on social and cultural factors relate to violence and development of skills to intervene with reduction/increase in violence/violent injury. Letter grading.

M237. Evolving Paradigms of Prevention: Interventions in Early Childhood. (4) (Same as Health Policy and Management M231.) Seminar, three hours; fieldwork, one hour. One designed for graduate students. Introduction to use of early childhood interventions as means of preventing adverse health and developmental outcomes. Examination of environmental vulnerability, approaches to assessment, models of service delivery, evaluation, and cost-benefit issues, funding, and other policy issues. Letter grading.

M238. Evolving Paradigms of Prevention: Interventions in Adolescents. (4) Three hours. Adolescents, intervention models, and prevention of adolescent health and interventions, with focus on sex, alcohol, and drug use. What is normative during this period? What is not, what is associated with these behaviors (e.g., peer influence), and how these behaviors may affect youth during this developmental period (e.g., changes in brain). How to intervene with youth and adolescents. Building of skills to work with adolescent populations. Several practitioners in field to be guest lecturers. Letter grading.

M239. Race, Ethnicity, and Culture as Concepts in Practice and Research. (4) (Same as Asian American studies M230.) Seminar, three hours. Integration of cross-cultural findings in healthcare with current American (U.S.) healthcare system paradigms to facilitate designing culturally based public health programs and to train culturally competent practitioners. Letter grading.

M240. Child and Reproductive Health in Communities: Global Environmental Perspective. (4) Lecture, three hours. Recommended requisites: course 100. Examination of global issues of child and reproductive health in relation to environmental factors in interplay with socioeconomic and biological factors. Environmental influences are responsible for one quarter of total burden of disease worldwide, and for more than one third of burden among children—from most of the children living in resource-poor countries and communities. Discussion of impacts of qualitatively different, and potentially modifiable, factors such as access to safe water or urbanization, as well as environmental contribution to high-burden outcomes in childhood and reproduction. Focus on settings and discussion of relevant population-based approaches to assessment and intervention. Letter grading.

M244. Advanced Seminar: Medical Anthropology. (2 to 4) Seminar, three to four 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 and mortality, health aspects, including epidemiology, comorbidity 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.

M250. HIV/AIDS and Culture in Latin America. (4) (Same as Latin American Studies M262.) 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 and mortality, health aspects, including epidemiology, comorbidity 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.

M251. Nutritional Epidemiology I. (4) (Same as Epidemiology M252.) Lecture, two hours; discussion/lab, one hour. Preparation: introductory biology and epidemiology courses. Review of all aspects of contemporary nutrition sciences that require application of epidemiologic principles and methods, ranging from food-borne outbreak investigation to evidence-based regulatory assessment of health claims for foods. Experience in actual world of collecting, analyzing, and interpreting data related to nutrition and health or disease outcomes. S/U or letter grading.

M252. Health Policy Analysis. (4) (Same as Health Policy and Management M233.) Lecture, three hours. Recommended requisites: Health Policy and Management 100 or 200A, M236, M267. Conceptual and procedural tools for analysis of health policy and epidemiology courses. Review of all aspects of contemporary nutrition sciences that require application of epidemiologic principles and methods, ranging from food-borne outbreak investigation to evidence-based regulatory assessment of health claims for foods. Experience in actual world of collecting, analyzing, and interpreting data related to nutrition and health or disease outcomes. S/U or letter grading.

M253. Public Health Policy Analysis. (4) (Same as Health Policy and Management M234.) Lecture, two hours; discussion/lab, one hour. Preparation: introductory biology and epidemiology courses. Review of all aspects of contemporary nutrition sciences that require application of epidemiologic principles and methods, ranging from food-borne outbreak investigation to evidence-based regulatory assessment of health claims for foods. Experience in actual world of collecting, analyzing, and interpreting data related to nutrition and health or disease outcomes. S/U or letter grading.
have specific risk factors for injuries, many of which are preventable. Presentation of approaches to re-
seach and prevention of pediatric injuries. Letter 
grading.

M256. Interdisciplinary Response to Infectious Disease Emergencies: Public Health Perspective. (4) (Same as Medicine M256, Nursing M298, and Oral Biology M296.) Lecture, four hours; discussion, one 
hour. Enforced requisites: coursework in biology and 
human disease. Available to students who have 
not already taken coursework or the equivalent of 
Johns Hopkins University School of Public Health. Letter grading.

256. Health in Context: Adapting to Change in an Evolving Society. (4) (Same as Sociology M266 and Latin American Studies M265.) Lecture, three hours. Recommended requisites: 
course 210, Multicultural American Society. Exploration of 
how culture is interrelated across multiple level of analysis, from individual to group to 

M260. Health and Culture in Americas. (4) (Same as Anthropology M266 and Latin American Studies M265.) Lecture, three hours. Recommended requisites: 
course 210, Multicultural American Society. Examination of 
how culture is interrelated across multiple level of analysis, from 
individual to group to collective. Integrates practice and theory. Letter grading.

M263. Social Demography of Los Angeles. (4) (Same as Sociology M263.) Seminar, two hours. Recommended requisites: 
course 210, Multicultural American Society. Examination of 
the social and demographic factors that characterize Los Angeles 
and its neighborhoods. Letter grading.

M264. Latin America: Traditional Medicine, Shamanism, and Folk Illness. (4) (Same as Anthropology M264 and Latin American Studies M264.) Lecture, three hours. Recommended requisites: 
course 210, Multicultural American Society. Examination of 
the role of traditional medicine and shamanism in Latin America 
and how these practices have evolved over time. Letter grading.

265. Images of Aging and Illness. (4) Lecture, three hours. Recommended requisites: coursework in sociology of aging, 
biology, and health sciences. Examination of the 
representation of aging and illness in the media, focusing on 
how these representations can shape public perceptions of 
aging and health. Letter grading.

270A-270B. Foundations of Community Health Sciences. (4-4) Lecture, four hours. Enforced requisites: 
course 210. Course 270A is enforced requisites to 
270B. Limited to departmental doctoral students. In 
depth analysis of theories, methods, and research on
which community health sciences are based. Letter 
grading.

science approach to natural determinants of change, 
as foundation for planned change in health-related 
behaviors at community, group, and individual levels. Letter 
grading.

M272. Social Epidemiology. (4) (Same as Epidemiology M272.) Lecture, two hours; discussion, one hour. Enforced requisites: 
course 210, Multicultural American Society. Examination of 
the social and demographic factors that characterize Los Angeles 
and its neighborhoods. Integration of practice and theory. Letter grading.

273. Social Epidemiology of Chronic Disease. (4) Lecture, two hours; discussion, one hour. Enforced requisites: 
course 210, Multicultural American Society. Examination of 
the social and demographic factors that characterize Los Angeles 
and its neighborhoods. Integration of practice and theory. Letter grading.

M274. Health Professions. (4) (Same as Sociology M249A.) Lecture, three hours. Enforced requisites: coursework in 
health sciences. Letter grading.

276. Complementary and Alternative Medicine. (4) Lecture, three hours. Enforced requisites: coursework in 
health sciences. Letter grading.

M278. Work and Health. (4) (Same as Environmental Health Sciences M270.) Lecture, three hours; 
practicum, one hour. Recommended requisites: coursework in 
health science. Letter grading.

281. Capstone Seminar: Health Promotion and Edu-
cation. (4) Seminar, discussion, 90 minutes. Enforced requisites: 
course 210. Course 281 is recommended requisites to 
letter grades received in the program. Letter grading.

282. Communication in Health Promotion and Edu-
cation. (4) Lecture, three hours. Recommended requisites: 
courses 210, 216, and 295. Letter grading.
M294. Social and Behavioral Factors of HIV/AIDS: Global Perspective. (4) (Same as Psychiatry M288.) Lecture, four hours. Requisites: course 100 and Epidemiology 100, or prior social sciences courses. Overview of issues in disaster preparedness and response for public health agencies. Introduction to theoretical and practice aspects of field of emergency public health. Examination of disaster cycle and various natural and human-induced hazards from public health perspective. Letter grading.


296. Advanced Research Topics in Community Health Sciences. (2 to 4) Discussion, two to four hours. Advanced study and analysis of current topics in community health sciences. Discussion of current research and literature in research specialty of faculty member teaching course. 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 or letter grading.

400. Field Studies in Public Health. (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.S. minimum course requirement; 4 units may be applied toward 60-unit minimum total required for M.P.H. degree. Letter grading.

401. Measuring Sensitive Topics. (4) Lecture, two hours; discussion, two hours. Limited to School of Public Health doctoral students. Data collection methods and designs and how to think analytically about methods of assessment 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. Practical 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 Policy and Management M411.) Lecture, four hours. Designed for juniors/seniors and graduate students. Introduction to causes and characteristics of cancer, 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.) Lecture, four hours. Requisites: Biostatistics 100A, Epidemiology 247A, 247B, and/or 100. Presentation of how to do health surveys in Third World countries. Practical assistance for planning and organizing surveys, including use of microcomputers to develop test questionnaire, select sample, process and analyze data, and prepare final report. Letter grading.

M420. Children with Special Healthcare Needs: Systems Perspective. (4) (Same as Health Policy and Management M420 and Social Welfare M203.) Seminar, three hours; fieldwork, one hour. Examination and evaluation of principles, policies, programs, and practices that have evolved to identify, assess, and meet special needs of infants, children, and adolescents with special health needs. Letter grading.

425. Child Advocacy: Skills for Effective Action. (4) Seminar, three hours; fieldwork, one hour. Designed for graduate students. Use of case method; core course to involve students both in classroom discussions and in fieldwork projects about which they update classmates. Highly respected leaders for children in community share experiences and offer insight. Letter 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 whose disbandment may affect development of appropriate school service models. Letter grading.

427. Reproductive Health in Sub-Saharan Africa. (4) Lecture, three hours. Requisites: admission to course 247. 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 reproductive health services. Provided. Value added is in-depth understanding of ways in which scientists “know” and considerations of women’s place in scientific discourse. Examination of series of case studies as starting point for discussion. Letter grading.

M430A-M430B. Child Health, Programs, and Policies. (4) (Same as Health Policy and Management M430A-M430B.) Lecture, four hours. Requisite: Health Policy and Management 100. Course M430A is requisite to M430B. Examination of history of child health policy trends and determinants of health, structure, and function of health service system; needs, programs, and policies affecting especially at-risk populations. Letter grading.

437. Principles and Practice of Preventive Medicine. (4) Lecture, two hours; discussion, two hours. Designed for graduate students. Comprehensive review and evaluation of scientific background and application of principles 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, two hours; discussion, one hour; research and literature review, one hour. Designed for graduate students. Epidemiology of male and female reproductive health tracts, and various natural and human-induced hazards from public health perspective. Letter grading.

441. Planning and Evaluation of Global Health Programs. (4) Lecture, four hours. Theory, guidelines, and team exercise for planning community health/ family planning projects in U.S. and in developing countries. Phases include community needs identification; goal setting; budget and work plan development; funding; staffing; evaluation design; data and cost analysis; and project presentation. Letter grading.


444. Anthropometric and Dietary Aspects of Nutritional Diseases. (4) Lecture, four hours. Requisite: one course in laboratory. Two hours. Requisite: course 443. Practical skills in anthropometric and dietary assessment, including selection of appropriate methods, data gathering and evaluation, and analysis and presentation. Letter grading.

446. Nutrition Education and Training: Third World Considerations. (4) Lecture, two hours; discussion, one hour; student participation, four hours. Requisite: course 434A. Problems and priorities in nutrition edu-
cation and training for families and health workers in Third World countries, including new concepts in primary healthcare, systematic 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. Recommended preparation: background in Islamic or Middle Eastern studies. Requisite: course 200 or 231 or 434A. Current health issues and problems of countries in Middle East and implications for socioeconomic development. Review of economic, demographic, and cultural inflection 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 agencies. Emphasis on meeting needs of vulnerable populations. Letter grading.

449. Nutrition and Chronic Disease. (4) Lecture, four hours. Preparation: Graduate or undergraduate course each in chemistry or biochemistry, physiology, and nutrition, or M.D. degree. Advanced-level seminar on nutritional needs of healthy individuals, current knowledge of role of nutrition in disease prevention, nutritional and metabolic responses to disease, and role of nutritional therapy in management of disease. Letter grading.


452. Management of Food and Nutrition in Major Emergencies. (4) Lecture, three hours. Designed for second-year master’s or doctoral students interested in humanitarian relief. Basic principles required to design rational and cost-effective food and nutrition emergency relief approaches and programs. Letter grading.

CM470. Improving Worker Health: Social Movements, Food and Public Health. (4) (Same as Environmental Health Sciences M471 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. Concurrently scheduled with course CM170. S/U or letter grading.


477. Health Disparities, Health Equity, and Sexual Minority Populations. (4) Lecture, two hours; discussion, one hour. Limited to graduate students. Examination of health disparities affecting sexual minority populations, category that includes lesbians, gay men, bisexuals, and transgender (LGBT) persons. Use of Healthy People 2010 Comparison Document for LGBT population as a focus and national recommendations for achieving reductions in each area. Discussion of considerations for providing clinical care and public health practice in this population, unique contextual factors influencing LGBT health, 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. Requirements: courses 210, 211A, 211B. Understanding of professional practice in health-related organizations. Letter grading.

483. Leadership Development and Empowerment for Health Promotion and Health 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 system for health promotion in multicultural and distressed communities (e.g., south-central Los Angeles). Letter grading.

484. Risk Communications. (4) Lecture, three hours; fieldwork, one hour. Requisites: courses 210, 211A, and 211B, or prior public health and behavioral sciences courses. Risk communication theory, research, and practice, including social and psychological bases of 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 developing grant proposal, researching funding sources, evaluating proposals, developing volunteer and in-kind resources, and implementing capital 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 is emphasized, information and ideas can be applied to other educational and training settings. S/U grading.

501. Community Programs. (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. 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.

595B. 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 is emphasized, information and ideas can be applied to other educational and training settings. 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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Kathleen C. King, Ph.D.
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Todd S. Presner, Ph.D.
Jennifer A. Sharpe, Ph.D.
Ross P. Shideler, Ph.D.
Shu-mei Shih, Ph.D.
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**Professors Emeriti**

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**Associate Professors**

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Kenneth Reinhard, 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 multilingual 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/admissions喆 for up-to-date information regarding transfer selection for admission.

The Major

Required: Ten courses, of which (1) five must be from comparative literature offerings, including Comparative Literature 100 and at least four additional comparative literature courses selected from M101 through 197, (2) three upper division literature courses using original language texts in the primary language area, and (3) two upper division literature courses using original language texts in the secondary language area (students may petition the undergraduate adviser to take two upper division literature courses in translation if their primary 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 paper of approximately 25 pages.

Comparative Literature Minor

The Comparative Literature minor offers students interested in literature and the humanities the opportunity to gain insight into the critical problems and theories addressed by comparative literature and to apply that knowledge in literature and comparative literature courses.

To enter the minor students must have fulfilled the College Writing requirement, have completed 40 units with an overall grade-point average of 2.0 or better, have taken at least one year or equivalent of a language other than English, and file a petition with either the faculty or staff undergraduate adviser, 350B Humanities Building, (310) 825-7650.

Required Courses (28 units minimum): (1) Four upper division comparative literature courses (one course from Comparative Literature 1A through 4DW may be substituted), (2) two upper division courses in one literature (e.g., Arabic, Chinese, English, French, German, Korean, Russian, Spanish) in the original language, and (3) one upper division course in a second literature in the original language (one level six foreign language course may be substituted). If students complete two upper division courses in a language other than English, they may petition to take one upper division course taught in English translation to fulfill the third requirement.

A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor.

Each minor course must be taken for a letter grade, and students must have an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website, http://grad.ucla.edu/gasasa_libraries/pgmrojintro.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

Lower Division Courses

1A. World Literature: Antiquity to Middle Ages. (5) Lecture, three hours; discussion, one hour. Enforced prerequisite: satisfaction of Entry-Level Writing requirement. Not open for credit to students with credit for course 2AW or 4AW. Study of major texts in world literature, with emphasis on Western civilization. Texts include major works and authors such as Iliad or Odyssey, Greek tragedies, portions of Bible, Virgil, Petrarch, St. Augustine, and others such as Gilgamesh or Vistan and Isin. P/NP or letter grading.

1B. World Literature: Middle Ages to 17th Century. (5) Lecture, three hours; discussion, one hour. Enforced prerequisite: satisfaction of Entry-Level Writing requirement. Not open for credit to students with credit for course 2BW or 4BW. 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, Cavalcanti’s Don Quixote, Shakespeare, Calderón, Molíère, and Racine. P/NP or letter grading.

1C. World Literature: Age of Enlightenment to 20th Century. (5) Lecture, three hours; discussion, one hour. Enforced prerequisite: satisfaction of Entry-Level Writing requirement. Not open for credit to students with credit for course 2CW or 4CW. Study of major texts in world literature, with emphasis on Western civilization. Authors include Swift, Voltaire, Diderot, Dideret, Rousseau, Goethe, Faubert, Ibsen, Strindberg, Dos toievy, 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 prerequisite: 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 overlooked in courses that focus only on canon of Western literature. Texts from at least three of following areas read in any given term: African, Caribbean, East Asian, Latin American, and Middle Eastern literature. P/NP or letter grading.

2AW. Survey of Literature: Antiquity to Middle Ages. (5) Lecture, two hours; discussion, two hours. Enforced prerequisite: 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 by authors such as Homer, Gilgamesh, Sappho, Greek tragedies, Aeneid, Petronius, Beowulf, Marie de France, Tristan and Isolde, 1001 Nights, Popul Vuh. Satisfies Writing II requirement. Letter grading.

2BW. Survey of Literature: Middle Ages to 17th Century. (5) Lecture, two hours; discussion, two hours. Enforced prerequisite: 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. Study of selected texts from Middle Ages to 17th century, with emphasis on literary analysis and expository writing. Texts may include works by authors such as Chaucer, Dante, Cervantes, Marivaux, Shakespeare, Calderón, Molíère, and Racine. Satisfies Writing II requirement. Letter grading.

2CW. Survey of Literature: Age of Enlightenment to 20th Century. (5) Lecture, two hours; discussion, two hours. Enforced prerequisite: English Composition 3 or 3H or English as a Second Language 36. Not open for credit to students with credit for course 1C or 4C. Study of selected texts from Age of Enlightenment to 20th century, with emphasis on literary analysis and expository writing. Texts may include works by authors such as Swift, Voltaire, Diderot, Rousseau, Goethe, Faubert, Ibsen, Strindberg, M. Shelley, Dostoievsky, Kafka, James Joyce, Garcia Marquez, and Jamaica Kincaid. Satisfies Writing II requirement. Letter grading.
2DW. Survey of Literature: Great Books from World at Large. (5) Lecture, two hours; discussion, two hours. Prerequisite: English Composition 3 or 3H or English as a Second Language 36. Not open for credit to students with credit for course 1D or 4DW. Survey of major literary texts usually overlooked in courses that focus only on canon of Western literature, with emphasis on literary analysis and expository writing. Texts from at least three of following areas read in any given term: African, Caribbean, East Asian, Latin American, and Middle Eastern literature. Satisfies Writing II requirement. Letter grading.

4AW. Literature and Writing: Antiquity to Middle Ages. (5) Discussion, four hours. Enforced requisite: English Composition 3 or 3H or English as a Second Language 36. Not open for credit to students with credit for course 1B or 2BW. Study and discussion of selected texts from antiquity to Middle Ages, with emphasis on literary analysis and expository writing. Texts include works and authors such as Iliad, Odyssey, Gilgamesh, Sappho, Greek tragedies, Greek tragedies, Lucretius, Petronius, Beowulf, or Marie de France. Satisfies Writing II requirement. Letter grading.

4BW. Literature and Writing: Middle Ages to 17th Century. (5) Discussion, four hours. Enforced requisite: English Composition 3 or 3H or English as a Second Language 36. Not open for credit to students with credit for course 1A or 2AW. Study and discussion of selected texts from Middle Ages to 17th century, with emphasis on literary analysis and expository writing. Texts may include works and authors such as Chaucer, Dante’s Divine Comedy, Cervantes’s Don Quixote, Shakespeare, Diderot, Aristotle, Christine de Pizan, Popul Vuh, Molèire, and Racine. Satisfies Writing II requirement. Letter grading.

4CD. Literature and Writing: Age of Enlightenment to 20th Century. (5) Discussion, four hours. Enforced requisite: English Composition 3 or 3H or English as a Second Language 36. Not open for credit to students with credit for course 1C or 2BW. Study and discussion of works from Age of Enlightenment to 20th century, with emphasis on literary analysis and expository writing. Texts may include works by authors such as Swift, Voltaire, Diderot, Rousseau, Goethe, M. Shelley, Flaubert, Ibsen, Strindberg, Dostoiesy, Gogol, Kafka, Joyce, Beckett, L. Hughes, and Garcia Marquez. Satisfies Writing II requirement. Letter grading.

4DW. Literature and Writing: Great Books from World at Large. (5) Discussion, four hours. Enforced requisite: English Composition 3 or 3H or English as a Second Language 36. Not open for credit to students with credit for course 1B or 2BW. Study and discussion of major literary works from around the world since 20th century, with emphasis on literary analysis and expository writing. Texts from at least three of following areas read in any given term: African, Caribbean, East Asian, Latin American, and Middle Eastern literature. Texts may include works by authors such as Ngugi, Desai, Kincaid, Emecheta, El Saadawi, Achebe, Pak, Can Xue, Neruda, and Rushdie. Satisfies Writing II requirement. Letter grading.

Upper Division Courses

100. Introduction to Literary and Critical Theory. (5) Lecture, four hours. Preparation: satisfaction of Entry-Level Writing and College Writing requirements. Requisites: two courses from Comparative Literature 1 or 2 series or English 10 series or Spanish 10 series or course 100. Exploration of history of comparative literature discipline and variety of central methodological past and present debates concerning nature of discipline. Introduc-tion to several key theoretical texts from 20th century to present, addressing these and other related questions: what does it mean to read comparative-ly? What is significance of reading literature across existing national and literary categories? What are criteria for conducting such comparative readings? Is comparative reading more concerned with finding similarities or differences? P/NP or letter grading.

M119. Al-Andalus: Literature of Islamic Spain. (4) (Same as Arabic M115.) Lecture, three hours. Study of the literary production of Al-Andalus and the interaction of Arabic and Western and Arabic and Jewish cultures and to recognize Islamic culture as vital force in European life and letters. P/NP or letter grading.

120. Individual and Society in Renaissance. (4) Lecture, three hours; discussion, one hour. Requisite: one course from 1A, 1B, 1C, 2A, 2B, 2CW, or English Composition 3 or 3H. Exploration of changes in Western man’s relationship to his world, himself, and his art; reading of such works as Don Quixote, Montaigne’s Essays, Gargantua and Pantagruel, The Praise of Folly, Utopia. P/NP or letter grading.

C122. 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 liter-ary influences on plays. Readings include works of such dramatists as Tasso, Machiavelli, Lope de Vega, Racine, Jonson, Shakespeare. May be concurrently scheduled with course C222. Undergraduate students read all works in translation. P/NP or letter grading.

M123. World Literature and Performance of Arab World. (4) (Same as Arabic M123.) Lecture, three hours. Knowledge of Arabic not required. Introduction to study of living oral traditions of troubadours, story-telling, desert poets, and performing arts in Arabic-speaking Middle East. P/NP or letter grading.

M132. Comparative Media Studies. (4) (Same as Russian M132.) Lecture, three hours. History, form, and function of media. Grounded in political and social theory, comparative investigation of media technologies, today’s burgeoning markets, and yesterday’s tragic abuses. Development of media form(s) and content across various regions, and specific genres such as Slavic and Middle Eastern. P/NP or letter grading.

M148. Contemporary Arab Film and Song. (4) (Same as Arabic M148.) Seminar, three hours. Exploration of conjunctions between contemporary Arab film and song and between popular cultures and cultures of commitment (ilitzam), with possible focus on specific genres such as realist/nearrealist Arab film; feminist Arab film or popular Arab film and song; topics such as nation, gender, and representation or de-mocracy and human rights or censorship, reception, and resistance. Possible variation of various national cinemas such as Egyptian, Yemeni, or Moroccan, Arab-American film, and musical genres such as Rai, Mizouz, and Hip-hop also examined in relation to emergence not only of national cinemas, national music industries, and iconic singers but also of international media, satellite TV, and newly popular musical genres shows — all products of transnational and pan-Arab mass media. P/NP or letter grading.

M152. Symbolism and Decadence. (5) Seminar, four hours. Designed for upper division literature majors. Study of symbolist and decadent movements in 19th- and 20th-century English and French poetry and prose, including authors such as Baudelaire, Rimbaud, Verlaine, Mallarmé, Wilde, Yeats, and Eliot. May be concurrently scheduled with course C252. Under-graduate students may read all required French texts in translation. P/NP or letter grading.

M153. Post-Symbolist Poetry and Poetics. (5) Seminar, four hours. Study of late 19th- and early 20th-century French and English literature majors. Study of specific poets and poetic traditions to them during first half of 20th century. Texts may include poets such as W.B. Yeats, Ezra Pound, T.S. Eliot, Germaine Dulac, Paul Valéry, R.M. Rilke, and Wallace Stevens. May be concurrently scheduled with course C253. Undergraduate students may read all works in translation. P/NP or letter grading.

154. Adventures of Avant-Garde. (5) Seminar, four hours. Designed for upper division literature majors. Interdisciplinary study of avant-garde literature and art, including futurism, Dadaism, Expressionism, Surrealism, new avant-gardes. Works by Marinetti, Boccioni, Picasso, Stein, Malevich, Popova, Mayakovsky, Brecht, Fritz Lang, Duchamp, Breton, Bunuel, Lispe-
C161. Fiction and History. (4) Seminar, three hours. Designed for upper division literature majors. Analysis of oral and written historical events, situations, and characters in literary works of Renaissance and/or modern period. Texts and individual assignments range from Renaissance historical narratives (Italian humanists, Machiavelli) to 19th- and 20th-century novels by authors such as Dickens, Balzac, Dostoevsky, Lampedusa, Camus, 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. 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.

C264. Modern European Novel. (5) Seminar, three hours. Designed for upper division literature majors. Study of modern European and American works that are concerned both in subject and form with growth of self-consciousness of human beings and their society, with focus on works of Kafka, Rilke, Woolf, Sartre, and Stevens. May be concurrently scheduled with course C256. Undergraduate students may read all works in translation. P/NP or letter grading.

C265. Holocaust in Literature. (4) (Same as Jewish Studies M151.) Lecture, three hours. Study of modern European novel's development from 19th to 21st century. Use of authors such as Hesse, Strindberg, Lagerkvist, Gide, Proust, Mann, Joyce, Kafka, Woolf, Nabokov, Grass, Christa Wolf, and Enquist to focus on development of themes such as shifting authority, gender conflicts, change versus stability, formal experimentation, and self-consciousness in narrative. May be concurrently scheduled with course C272. Undergraduate students may read all works in translation but are encouraged to read in original language whenever possible. P/NP or letter grading.

M165. Holocaust in Literature. (4) (Same as Jewish Studies M151.) Lecture, three hours. Investigation of how Holocaust informs variety of literary and cinematic works and raises wide range of aesthetic and moral questions. P/NP or letter grading.

M166. Modern Jewish Literature in English: Diaspora Literature (Same as Asian American Studies M187.A) Lecture, three hours. Study of literary responses of Jews to modernity, its challenges, and threats. Readings in texts originally written in English and translated from German, Russian, French, and Italian. Analysis of formal aspects of each work. P/NP or letter grading.

M187. Modern Arabic Literature in English. (4) (Same as Arabic M151.) Lecture, three hours. Designed for upper division literature majors. Topics may include constructions of otherness in modern Arab culture; East-West debate; memory, trauma, and mourning; violence, narrative, and ethics; globalization, oil, and cultural insurgency; Arab culture in transnational context or questions of reception, exoticism, translation, and marketing. Genres may include prison narratives, war literature, and stories by women and/or by refugees and exiles; 19th- and 20th-century travel narratives; Arabic romantic poetry; literature of pre-1948; rise of Arab novel. Areas may range from generic to connected; issues may focus on Maghreb or one country such as Algeria, Palestine, Iraq, Lebanon, or Egypt. May also be organized around Arabic literature written in one specific language, namely English, Arabic, or French.

M188. Korean American Literature. (4) (Same as Asian American Studies M132B.) Seminar, three hours. Comprehensive introduction to Korean American literature, with emphasis on Korean American experience, problems of gender, race, and class, nationalism, generational relationships, and impact of traditional Korean culture on Korean American literature. P/NP or letter grading.

C171. Short Stories. (4) Seminar, three hours. Designed for upper division literature majors. Study of short story as a literary form. Focus on students' writing. May be concurrently scheduled with course C281. Undergraduate students may read all works in translation. 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 defines new ways — philosophically, scientifically, and economically. Emphasis on relationship of recent novels to theories of structuralism and poststructuralism. Readings include authors such as Borges, Beckett, Nabokov, Pynchon, Faulkner, Grass, Böll, and Calvino. Concurrently scheduled with course C272. Undergraduate students may read all works in translation. P/NP or letter grading.

C173. Postmodernism and Third World. (4) Seminar, three hours. Exploration of interconnection between concepts of postmodernism and Third World culture and politics, including topics such as post-Marxism and revolution; historical thought; gender, ethnicity, imperialism, and their relationship to cultural politics; and recent Latin American literary production. Concurrently scheduled with course C273. P/NP or letter grading.

M175. Race, Gender, Class. (5) (Same as Asian American Studies M165.) Seminar, three hours. Theoretical and literary readings combined to explore three main aspects of social and cultural experience (race, gender, class) as separate but interconnected spheres affecting both minority and majority populations in U.S. Examination of these issues from comparative perspectives. P/NP or letter grading.

M176. Literature and Technology. (4) (Same as Japanese M156.) Lecture, three hours. Examination of technology in 20th-century fiction. Discussion of impact of technology on shifting images of gender, subjectivity, and national identity. P/NP or letter grading.


C178. India Ink: Literature and Culture of Modern South Asia. (5) Seminar, three hours. Survey of significant issues in history of 20th-century Indian literature and culture. Great works of modern Indian culture by such figures as Rabindranath Tagore, Satyajit Ray, Faiz Ahmed Faiz, and U.R. Ananthamurthy, including novels, short stories, poetry, films, music, and works in other artistic forms. P/NP or letter grading.

169. Continental African Authors. (4) Lecture, three hours. Required course: one from 1A, 1B, 1C, 2AW, or 2B. P/NP or letter grading. Introduction to new set of African authors and attempt to discern similarities or differences they may have with major authors such as Achebe, Ngugi, Armatx, Soyinka, etc. P/NP or letter grading.

M170. Holocaust in Literature. (4) (Formerly numbered M170.) (Same as Gender Studies CM170.) Seminar, three hours. Designed for upper division literature majors. Investigation of narrative texts by contemporary French, German, English, American, Spanish American, and Asian women writers from cross-cultural perspective. Common themes, problems, and historical contexts. P/NP or letter grading.

M171. Chinese Immigrant Literature and Film. (4) (Same as Asian American Studies M130B and Chinese M153.) Lecture, three hours; discussion, one hour. Introduction to Chinese literature not required. In-depth look at Chinese immigrant experience by reading literature and watching films. Theories of diaspora, gender, and race to inform thinking and discussion of relation of text to its historical context. P/NP or letter grading.
202. Classical Tradition: Epic, Tragedy, or Comedy. (4) Seminar, three hours. Preparation: reading knowledge of one appropriate foreign language. Read ancient Roman works and their re-creations in Renaissance and modern periods. Emphasis on how poets build on work of their predecessors. Reading may range from Iliad or Odyssey to tragedies by Sophocles and Euripides or satires by Aristophanes. S/U or letter grading.

205. Comic Vision. (4) Lecture, three hours. Preparation: reading knowledge of one appropriate foreign language. Read ancient Roman works and their re-creations in Renaissance and modern periods. Emphasis on how poets build on work of their predecessors. Reading may range from Iliad or Odyssey to tragedies by Sophocles and Euripides or satires by Aristophanes. S/U or letter grading.

206. Archetypal Heroes in Literature. (4) Seminar, three hours. Preparation: reading knowledge of one appropriate foreign language. Read ancient Roman works and their re-creations in Renaissance and modern periods. Emphasis on how poets build on work of their predecessors. Reading may range from Iliad or Odyssey to tragedies by Sophocles and Euripides or satires by Aristophanes. S/U or letter grading.

207. Individual Studies in Comparative Literature. (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 reading and tangible evidence of mastery of subject matter required. May be repeated for credit. Individual contract required. P/NP or letter grading.

208. Honors Research in Comparative Literature. (2 to 4) Tutorial, three hours. Limited to senior comparative literature honors students. Development and completion of honors thesis or comprehensive project on comparative topic selected by student and written under supervision of core faculty member. Students expected to meet regularly with supervisor throughout term. No more than one course may be used to fulfill four-course requirement for Comparative Literature majors. May be repeated once for maximum of 8 units. Individual contract required. Letter grading.

209. Directed Research or Senior Project in Comparative Literature. (2 to 4) Tutorial, three hours. Requisite: course 100. 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 consent of chair. Individual contract required. P/NP or letter grading.

Graduate Courses

20A. Theory of Comparative Literature. (6) Seminar, three hours. Study of theory of literature, with emphasis on methodology of theoretical problems. S/U or letter grading.

20B. Methodology of Comparative Literature. (6) Seminar, three hours. Requisite: course 20A. Study of methodology of comparative literature, with emphasis on its history. S/U or letter grading.

20C. Comparative Literature. (5) Seminar, three hours. What is it when we do when we try to understand words, habits, gestures, and beliefs not our own? Do we understand something foreign to us by immersing ourselves in it? Does ability to understand something foreign imply taking universal standpoint? Can we make judgments about beliefs other than our own? Questions of cultural interpretation have tenor in Western and non-Western 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 C257. P/NP or letter grading.

20D. Research Colloquia in Comparative Literature. (2) Seminar, three hours. Designed to bring together students undertaking supervised tutorial research in seminar setting with one or more faculty members to discuss their own work or related work in discipline. Led by one supervising faculty member. May be repeated for credit. P/NP grading.

20E. Variable Topics in Comparative Literature. (4) Seminar, three hours. Established and regularly scheduled topics. Study and discussion of limited periods and specialized issues and approaches in literary theory, especially in relation to other modes of discourse such as history, philosophy, psychology, linguistics, anthropology. Development of culminating project required. Consult Schedule of Classes for topics to be offered in specific semesters. S/U or letter grading.

20F. Tutorial. Three hours. Limited to juniors/seniors. Individual intensive study, with scheduled meetings to be arranged between faculty member and student. Assigned reading and tangible evidence of mastery of subject matter required. May be repeated for credit. Individual contract required. P/NP or letter grading.

20G. Seminar. Three hours. Limited to senior comparative literature honors students. Development and completion of honors thesis or comprehensive project on comparative topic selected by student and written under supervision of core faculty member. Students expected to meet regularly with supervisor throughout term. No more than one course may be used to fulfill four-course requirement for Comparative Literature majors. May be repeated once for maximum of 8 units. Individual contract required. Letter grading.

20H. Study of an Unknown Author. (2 to 4) Lecture, three hours. Preparation: reading knowledge of one appropriate foreign language. Read ancient Roman works and their re-creations in Renaissance and modern periods. Emphasis on how poets build on work of their predecessors. Reading may range from Iliad or Odyssey to tragedies by Sophocles and Euripides or satires by Aristophanes. S/U or letter grading.

20I. Study of a Decade or Movement in Literature. (2 to 4) Lecture, three hours. Preparation: reading knowledge of one appropriate foreign language. Read ancient Roman works and their re-creations in Renaissance and modern periods. Emphasis on how poets build on work of their predecessors. Reading may range from Iliad or Odyssey to tragedies by Sophocles and Euripides or satires by Aristophanes. S/U or letter grading.

20J. Special Problems of a Well-Known Author. (2 to 4) Lecture, three hours. Preparation: reading knowledge of one appropriate foreign language. Read ancient Roman works and their re-creations in Renaissance and modern periods. Emphasis on how poets build on work of their predecessors. Reading may range from Iliad or Odyssey to tragedies by Sophocles and Euripides or satires by Aristophanes. S/U or letter grading.

20K. Special Problems of Comparative Literature. (2 to 4) Lecture, three hours. Preparation: reading knowledge of one appropriate foreign language. Read ancient Roman works and their re-creations in Renaissance and modern periods. Emphasis on how poets build on work of their predecessors. Reading may range from Iliad or Odyssey to tragedies by Sophocles and Euripides or satires by Aristophanes. S/U or letter grading.

20L. History of a Major Language. (2 to 4) Lecture, three hours. Preparation: reading knowledge of one appropriate foreign language. Read ancient Roman works and their re-creations in Renaissance and modern periods. Emphasis on how poets build on work of their predecessors. Reading may range from Iliad or Odyssey to tragedies by Sophocles and Euripides or satires by Aristophanes. S/U or letter grading.

20M. Survey of Major Cultures. (2 to 4) Lecture, three hours. Preparation: reading knowledge of one appropriate foreign language. Read ancient Roman works and their re-creations in Renaissance and modern periods. Emphasis on how poets build on work of their predecessors. Reading may range from Iliad or Odyssey to tragedies by Sophocles and Euripides or satires by Aristophanes. S/U or letter grading.

20N. Survey of a Major Continent or Region. (2 to 4) Lecture, three hours. Preparation: reading knowledge of one appropriate foreign language. Read ancient Roman works and their re-creations in Renaissance and modern periods. Emphasis on how poets build on work of their predecessors. Reading may range from Iliad or Odyssey to tragedies by Sophocles and Euripides or satires by Aristophanes. S/U or letter grading.

20O. Advanced Study of a Major Period. (2 to 4) Lecture, three hours. Preparation: reading knowledge of one appropriate foreign language. Read ancient Roman works and their re-creations in Renaissance and modern periods. Emphasis on how poets build on work of their predecessors. Reading may range from Iliad or Odyssey to tragedies by Sophocles and Euripides or satires by Aristophanes. S/U or letter grading.

20P. Comparative Study of a Major Author. (2 to 4) Lecture, three hours. Preparation: reading knowledge of one appropriate foreign language. Read ancient Roman works and their re-creations in Renaissance and modern periods. Emphasis on how poets build on work of their predecessors. Reading may range from Iliad or Odyssey to tragedies by Sophocles and Euripides or satires by Aristophanes. S/U or letter grading.
C253. Crisis of Consciousness in Modern Literature. (5) Seminar, three hours. Preparation: reading knowledge of one appropriate foreign language. Study of modern European and American works that are concerned both in subject matter and artistic methods with growing self-consciousness of human beings and their society, with focus on works of Kafka, Rilke, Woolf, Santayana, and Stevens. May be concurrently scheduled with course C163. Graduate students required to prepare papers based on texts read in original language. Students to meet as group one additional hour each week. S/U or letter grading.

C264. Modern European Novel. (5) Seminar, three hours. Preparation: reading knowledge of at least one appropriate foreign language. Study of modern European novel's development from 19th to 21st century. Use of authors such as Hardy, Strindberg, Lagerkvist, Gide, Proust, Mann, Joyce, Kafka, Woolf, Nabokov, Grass, Christa Wolf, and Enquist to focus on development of themes such as shifting authority, gender conflicts, change versus stability, formal experimentation, and self-consciousness in narrative. May be concurrently scheduled with course C164. Graduate students required to prepare papers based on texts read in original languages whenever possible and to meet one additional hour each week. S/U or letter grading.

266. Writing and Photographic Image. (4) Seminar, three hours. Preparation: knowledge of one appropriate foreign language. Designed for graduate students. Investigation of intertextual relations between writing and photography in American and European contexts. It is insisted that photographic images are part of public domain framed by writing and discourse and that, in turn, some forms of writing are framed by photographic modes of representation. S/U or letter grading.

267. Comparative Arab Studies. (5) Seminar, three hours. Limited to graduate students. Investigation of ways in which Arab literatures, artists, and intellectuals have come to imagine and construct viable structures of cultural empowerment on the basis 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 (lititzam) to fundamental concerns of Arab world, to responsible mimetic urgency, and to general uses/potencies of rhetoric and representation. In context of focused and profound asymmetries of power, temporalities, and actualities. S/U or letter grading.


C272. Postmodern Novel. (4) Seminar, three hours. Preparation: reading knowledge of one appropriate foreign language. Study of postmodern novel as it developed out of modernism. Postmodernism defined in three different ways — philosophically, scientifically, and experimentally. Particular emphasis on relationship of new novels to theories of structuralism and poststructuralism. Readings include authors such as Borges, Beckett, Nabokov, Pynchon, Fuentes, Grass, Boil, and Calvino. Concurrently scheduled with course C172. Graduate students required to meet as group one additional hour each week. S/U or letter grading.

C273. Postmodernism and Third World. (4) Seminar, three hours. Preparation: reading knowledge of one appropriate foreign language. Exploration of intersection between concepts of postmodernism and Third World. Solid cultural and political concepts such as post-Marxism and revolution; historical thought; gender, ethnicity, imperialism, and their relationship to cultural politics; and recent Latin American literary production. Concurrently scheduled with course C173. S/U or letter grading.

M274. Theorizing Third World. (4) (Same as Asian American Studies M261.) Seminar, three hours. Investigation of 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.

375. Nationalism and Immigration Today. (4) Seminar, three hours. Preparation: knowledge of one appropriate foreign language. Designed for graduate students. Literary and social discourses on issues of nationalism, immigration, and politics of identity in our postcolonial era, with consideration of broad range of texts (aesthetic presentations, theoretical reflections, and legal documents). S/U or letter grading.

M276. Reading Modern Bodies. (4) (Same as Japanese M276.) Seminar, three hours. Designed for graduate students. Exploration of construction of human body through various modern technologies and discourses, including those of disease, diet, race, gender, and sexuality. Examination of texts from variety of locales, with particular emphasis on Japan. S/U or letter grading.

277. Caribbean Literature from Negritude to Diaspora. (4) Seminar, three hours. Historical approach to modern Anglophone and Francophone Caribbean literature, retracing national identity, beginning with negritude movement's claim to Africa as expressed in Aimé Césaire's classic poem Cahier d'un retour au pays natal and ending with consideration of dispersion of identities in work of writers and intellectuals who contend with problem of diasporic Caribbean culture. S/U or letter grading.

C278. India Link: Literature and Culture of Modern South Asia. (5) Seminar, three hours. Survey of significant issues in the study of Indian literature and culture. Great works of modern Indian culture by such figures as Rabindranath Tagore, Satyajit Ray, Faiz Ahmed Faiz, Martin Murthy, included. Short stories, poetry, film, music, and work in cultural criticism and historical scholarship. Central and defining issue for 20th-century Indian culture is experience of British colonial rule and mass cultural and material experience it embodied. Exploration of manner in which literature and culture have developed in interaction with powerful social forces, such as struggle for national independence from British under leaders like Mahatma Gandhi and expansion of Indian diaspora. Concurrently scheduled with course C178. S/U grading.

279. Subaltern Studies: Colonial Histories and Cultural Critique. (5) Seminar, three hours. Examination of certain links between practice of cultural criticism and problems in historiography of colonial and postcolonial societies. Use of key texts by members of Subaltern Studies collective of Indian historians to explore some central issues arising from this relationship. What kind of interdisciplinary space is produced this glaring imbalance by considering new cultural critical output produced by Arab thinkers and artists Arab thought despite unmistakable proliferation of cultural and material trends and artists in aftermath of 1967. Course addresses and redresses this glaring imbalance by considering new cultural material — literary, critical, philosophical, artistic, and journalistic — produced before and after al-Nahda but mostly before and after 1967 and fosters insightful approaches to unlikely coexistence in Arab contemporaneity of ever-deepening and generalized crisis and of steady and consolidated development (if not effervescence) of cultural and artistic production. 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 authors such as Matthew Arnold, Walter Benjamin, George Steiner, and Susan Bassnett. S/U or letter grading.

285. Translation Workshop. (5) Seminar, three hours. Preparation: reading knowledge of at least one appropriate foreign language. Open to qualified undergraduates with proper language preparation. Introduction to principles of literary translation heuristically, that is, on basis of concrete practical considerations, and presentation of student work for discussion. Opportunity for students to determine whether they have desire and talent to pursue literary translation as part of their professional lives. S/U or letter grading.

286. Workshop: Social Sciences Translation. (4) Seminar, three hours; tutorial, one hour. Preparation: solid reading knowledge of at least one foreign language. Designed for graduate social sciences students. Techniques students need to render scholarly texts in their fields from language they use in their research into English and to advance their knowledge of language to stage where they can use it more effectively in all aspects of their research, as well as to take advantage of translation techniques they have learned. S/U or letter grading.

C287. Reading across Culture. (5) Seminar, three hours. What is it we mean when we understand words, habits, gestures, and beliefs not our own? Do we understand something foreign to us by immersing ourselves in it or by standing apart? Does ability to understand something foreign imply taking universal standpoint? Can we make judgments about beliefs other than our own? Questions of cultural interpretation have long history in both Western and non-Western cultures. Discussions about cross-cultural interpretation and comparative interpretation of cultures in both comparative literature and cultural anthropology. Reading of some very different cultures by such writers as Claude Lévi-Strauss, Amritav Ghosh, James Clifford, Edward Said, Gayatri Spivak, and Erich Auerbach. Concurrently scheduled with course C187. S/U or letter grading.

M288. Modern Arab Thought. (4) (Same as Arabic M288.) Seminar, three hours. While much has been written and said about resurgence and spread of political Islam after collapse of ideology of secular nationalism and failure of Arab national approaches to unlikely coexistence in Arab contemporaneity of ever-deepening and generalized crisis and of steady and consolidated development (if not effervescence) of cultural and artistic production. S/U or letter grading.

289. Theory of Film and Literature. (5) Seminar, three hours; film screening, two hours. Study of defining aims of theories of film and literature. Approaches vary by instructor (e.g., postcoloniality, psychoanalysis, semiotics, transnationalism, gender theory). S/U or letter grading.


292. Theories of Empire. (4) Seminar, three hours. History of theorizations of modern imperialism 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.


297. Death and Limits of Representation. (4) Seminar, three hours. Preparation: reading knowledge of one appropriate 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 once for credit. S/U or letter grading.

298. Aesthetics and Literature. (4) Seminar, three hours. Preparation: reading knowledge of one appropriate foreign language. Study of literary theory through exploration of approaches to literature by philosophers grounded on analytic tradition. Careful attention to concepts of truth, meaning, expression, representation, metaphor, fiction, and literature. Letter grading.

375. Teaching Apprentice Practicum. (1 to 4) Seminar, to be arranged. Preparation: apprentice personnel employment as teaching assistant, associate, or fellow. Teaching apprenticeship under active guidance and supervision of regular faculty member responsible for curriculum and instruction at UCLA. May be repeated for credit. S/U grading.


501. Cooperative Program. (2 to 8) Tutorial, to be arranged. Preparation: consent of UCLA graduate advisor and graduate dean, and host campus instructor, department chair, and graduate dean. Used to record enrollment of UCLA students in courses taken under cooperative arrangements with USC. S/U grading.

596. Directed Individual Study 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.


597. Preparation for M.A. and Ph.D. Examinations. (2 to 12) Tutorial, to be arranged. Limited to graduate students. Preparation for M.A. comprehensive examination or Ph.D. qualifying examinations. May be repeated for credit. S/U grading.


Computational and Systems Biology

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Tetsuya Iwasaki, Ph.D. (Mechanical and Aerospace Engineering)
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Kenneth L. Lange, Ph.D. (Biomathematics, Human Genetics)
Matteo Pellegrini, Ph.D. (Molecular, Cell, and Developmental Biology)
Van M. Savage, Ph.D. (Biomathematics, Ecology and Evolutionary Biology)
Marc A. Suchard, M.D., Ph.D. (Biomathematics, Biostatistics, Human Genetics)
Kixshu Grace Xiao, Ph.D. (Integrative Biology and Physiology)

Scope and Objectives

The major in Computational and Systems Biology is designed primarily for highly motivated undergraduate students interested in interdisciplinary studies in life sciences, behavioral sciences, and engineering and computer sciences. Preparation for the major consists of a broad foundation in basic sciences — chemistry, biology, physics, and mathematics, plus an introduction to computing. The major itself provides foundations in mathematical modeling, information processing, and control and systems analysis, with an emphasis on quantitative ideas and methodologies. Mathematical and other analytical skills are essential in the major.

Computational and Systems Biology majors have several options for in-depth studies: a coherent integration of courses selected from one of five designated concentrations: bioinformatics, biomedical systems, computers and biosystems, neurosystems, or systems biology. The 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, 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, computers and biosystems, neurosystems, or systems biology. The synergy for all concentrations is integrative systems, information, and computational systems modeling sciences in biology. The focus is primarily quantitative, as mastery of advanced quantitative skills is essential for multidisciplinary understanding. Each concentration emphasizes different systems or modalities, and modeling or other computational approaches. For students interested in broad options for postgraduate studies in life sciences and related areas, including medicine, the systems biology concentration covers the widest spectrum of quantitative systems studies at all levels. The other concentrations are more focused. For example, bioinformatics is more focused on computational aspects of genetics and biology at molecular and cellular levels. Students normally select one, but because the concentrations have substantial 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 or developmental information, or how regulatory sequences give rise to programs of gene expression, or how the genome encodes the capabilities of the human mind.

The biomedical systems concentration is designed for students interested 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 or developmental information, or how regulatory sequences give rise to programs of gene expression, or how the genome encodes the capabilities of the human mind.

The biomedical systems concentration is designed for students interested 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, com-
computation algorithm, or artificial intelligence applications in biological sciences, medicine, or pharmacology. Research problems are typically algorithm oriented and/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 neurosystems concentration is designed for students interested primarily in the nervous system, or quantitative neurophysiology, with emphasis on neural systems 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 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&SB/.

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): Bioengineering 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): Bioengineering 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): Neuroscience M161A, 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.

Honors Program

Students with a grade-point average of 3.5 or better in required major courses and a 3.0 cumulative GPA may apply for admission to the honors program. Honors or highest honors may be granted at the discretion of the faculty sponsor and the faculty committee to students demonstrating exceptional ability on the senior research thesis.

Mathematical Biology Minor

The Mathematical Biology minor introduces undergraduate students to an active interdisciplinary research field at UCLA. The minor core examines biological systems in a holistic and quantitative manner by emphasizing systems and integrative principles in biology. Students who complete the minor have sufficient training to apply the knowledge they learn in graduate school or employment of their choice. Students complete a core curriculum and an elective course. The minor consists of lower division courses basic to the minor and four core courses and one option course that provides the needed background in mathematical biology, molecular and cell biology, statistics and probability, and mathematical modeling and simulation methods for biological systems.
To enter the minor, students must (1) be in good academic standing (2.0 grade-point average or better) and have completed Computer Science 31 or Program in Computing 10A with a grade of C or better, (2) submit an application essay supporting their interest in pursuing the minor and detailing any projects that they have already undertaken, and (3) file a petition in the administrative office, 4436 Boelter Hall, after appropriate counseling.

Required Lower Division Courses (8 units): Mathematics 33A, 33B.

Required Upper Division Courses (24 units): Computational and Systems Biology M184, M186, Mathematics 170A or Electrical Engineering 131A or Statistics 100A, Molecular, Cell, and Developmental Biology M140 or 144, Statistics 100B, and one elective course selected from Biomatics 106, 108, Electrical Engineering 102, Mathematics 134, 136, 171, Molecular, Cell, and Developmental Biology 172, or Physiological Science 125.

A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor.

Each minor course must be taken for a letter grade, and students must have an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

**Structural Biology Minor**

The Structural Biology minor introduces undergraduate students to an active interdisciplinary quantitative biosciences research and teaching field at UCLA. It provides a coherent course plan encompassing basic foundations of the field. Beside broadening student knowledge in systems biology, the minor provides enhanced perspective about computational and systems biology methods and applications and better prepares students to make more informed choices about their future directions and careers. The minor consists of lower division courses basic to the minor, a survey seminar course, and four core courses and one option course that provide the needed background in molecular and cell biology, computational and systems engineering, and mathematical modeling and simulation methods for biological systems.

To enter the minor, students must (1) be in good academic standing (2.0 grade-point average or better) and have completed Computer Science 31 or Program in Computing 10A with a grade of C or better, (2) submit an application essay supporting their interest in pursuing the minor and detailing any projects that they have already undertaken, and (3) file a petition in the administrative office, 4436 Boelter Hall, after appropriate counseling.

Required Lower Division Courses (8 units): Mathematics 33A, 33B.

Required Upper Division Courses (20 units): Computational and Systems Biology M184, M186, Electrical Engineering 102, 141 (or Mechanical and Aerospace Engineering 171A), Molecular, Cell, and Developmental Biology M140 or 144, and one elective course selected from Biomatics 106, 108, Mathematics 134, 151A, 151B, 170A, 170B, 171, Molecular, Cell, and Developmental Biology 172, or Physiological Science 125.

A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor.

Each minor course must be taken for a letter grade, and students must have an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

**Computational and Systems Biology Upper Division Courses**

M184. Introduction to Computational and Systems Biology. (2) 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 informed basis for focused studies by students with computational and systems biology interests. Presentations by individual UCLA researchers discussing their active computational and systems biology research. P/NP grading.

M185. 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, Mathematics 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. (3) Formerly numbered M186B. (Same as Bioengineering CM186 and Computer Science CM186.) Lecture, four hours; laboratory, three hours; outside study, eight hours. Requisite: Electrical Engineering 102. Dynamic ecosystems modeling and computer simulation methods for studying biological/biomedical processes and systems at multiple levels of organization. Control system, multicompartmental, predator-prey, pharmacokinetic (PK), pharmacodynamic (PD), and other structural modeling methods applied to life sciences problems at molecular, cellular (biochemical pathways/networks), organ, and organismic levels. Both theory- and data-driven modeling, with focus on translating biomodeling goals and data into mathematical models and implementing them for simulation and analysis. Basics of numerical simulation algorithms, with modeling software exercises in class and PC laboratory assignments. Letter grading.

M187. Research Communication in Computational and Systems Biology. (2 to 4) (Formerly numbered M186C.) (Same as Bioengineering CM187 and Computer Science CM187.) Lecture, four hours; 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.

M188. Honors Research in Cybernetics. (4) Tutorial, to be arranged. Limited to juniors/seniors. Development and completion of honors thesis or comprehensive research project under direct supervision of faculty member. May be repeated for credit. Individual contract required. Letter grading.
COMPUTER SCIENCE

Henry Samueli School of Engineering and Applied Science

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Louis-Noel Pouchet, Ph.D.
Fabien Scalzo, Ph.D.

Lecturers S.O.E.
Paul R. Eggert, Ph.D.
David A. Smallberg, M.S.

Adjunct Professors
Alain C. Kay, Ph.D.
Boris Y. Kogan, Ph.D.
Peter S. Pao, Ph.D.
Peter L. Reiher, Ph.D.
M. Yahya Sanadidi, Ph.D.

Adjunct Associate Professors
Edward W. Kohler, Ph.D.
Carey S. Nachenberg, Ph.D.
Ani Nahapetian, Ph.D.

Scope and Objectives

Computer science is concerned with the design, modeling, analysis, and applications of computer-related systems. Its study at UCLA provides education at the undergraduate and graduate levels necessary to understand, design, implement, and use the software and hardware of digital computers and digital systems. The programs provide comprehensive and integrated studies of subjects in computer system architecture, computer networks, distributed computer systems, programming languages and software systems, information and data management, artificial intelligence, computer science theory, computational systems biology and bioinformatics, and computer vision and graphics.

The undergraduate and graduate studies and research projects in computer science are supported by significant computing resources. In addition to the departmental computing facility, there are over a dozen research laboratories specializing in areas such as distributed systems, multimedia computer communications, distributed sensor networks, VLSI systems, VLSI CAD, embedded and reconfigurable systems, computer graphics, bioinformatics, and artificial intelligence. Also, the Cognitive Systems Laboratory is engaged in studying computer systems that emulate or support human reasoning. The Biocybernetics Laboratory is devoted to multidisciplinary research involving the application of engineering and computer science methods to problems in biology and medicine.

The B.S. degree may be attained either through the Computer Science and Engineering major or through the Computer Science major described below.

In addition to the B.S. in Computer Science and Engineering and the B.S. in Computer Science, HSSEAS offers M.S. and Ph.D. degrees in Computer Science, as well as minor fields for graduate students seeking engineering degrees. In cooperation with the John E. Anderson Graduate School of Management, the Computer Science Department offers a concurrent degree program that enables students to obtain the M.S. in Computer Science and the M.B.A. (Master of Business Administration).

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The 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.

Preparation for the Major

Required: Chemistry and Biochemistry 20A; Computer Science 1, 31, 32, 33, 35L, 51A (or Electrical Engineering M116), Electrical Engineering 10; Mathematics 31A, 31B, 32A, 32B, 33A, 33B, 61; Physics 1A, 1B, 1C, 4AL, 4BL.

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, 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); three elective courses selected from Electrical Engineering 113, 113D, 115A, 115C, 132A, 141, 181D; 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, 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, 174C, 183, M184 (or Bioengineering M184) or Computational and Systems Biology M184), CM186 (or Bioengineering CM186 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 195 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 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.

Preparation for the Major

Required: Computer Science 20A; Computer Science 1, 31, 32, 33, 35L, M51A (or Electrical Engineering M16); Mathematics 31A, 31B, 32A, 32B, 33A, 33B, 61; Physics 1A, 1B, 1C, 4AL, 4BL.

The Major

Required: Computer Science 111, 118, 131, M151B (or Electrical Engineering M156C), M152A (or Electrical Engineering M156L), 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 five upper division computer science elective courses (20 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 two elective courses must be selected from Computer Science 112, 114, M117 (or Electrical Engineering M117), CM121 (or Chemistry and Biochemistry CM160A), CM122 (or Chemistry and Biochemistry CM160B), CM124 (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, 174C, 183, M184 (or Bioengineering M184) or Computational and Systems Biology M184), CM186 (or Bioengineering CM186 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 195 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.

Bioinformatics Minor

The Bioinformatics minor introduces undergraduate students to the emerging interdisciplinary field of bioinformatics, an active area of research at UCLA combining elements of the computational sciences with the biological sciences. The minor organizes the many course offerings in different UCLA departments into a coherent course plan providing students with significant training in bioinformatics in addition to the training they obtain from their major. Students who complete the minor will be strong candidates for admission to Ph.D. programs in bioinformatics as well as have the relevant training to obtain jobs in the biotechnology industry.

Students complete a core curriculum and an elective course and are strongly encouraged to participate in undergraduate research as early as possible in one of the many groups offering research opportunities in bioinformatics.

To enter the minor, students must be (1) in good academic standing (2.0 grade point average or better), (2) have completed at least two of the lower division requirements with minimum grades of C; and (3) file a petition in the Office of Academic and Student Affairs of the Henry Samueli School of Engineering and Applied Science, 6426 Boelter Hall.

Required Lower Division Courses (14 units minimum): Computer Science 32 or Program in Computing 10C, Life Sciences 3, 23L, Mathematics 33A.

Required Upper Division Courses (18 units minimum): Computational and Systems Biology M184 (or Computer Science M184), Computer Science 180 (or Mathematics 182), two courses from Computer Science CM121 (or Chemistry and Biochemistry CM160A) or CM122 (or Chemistry and Biochemistry CM160B) or CM124 (or Human Genetics CM124), and one bioinformatics elective course selected from Computational and Systems Biology M186, Computer Science CM121, CM122, CM124, 170A, Ecology and Evolutionary Biology 135, Electrical Engineering 102, 141, Human Genetics C144, Molecular Cell, and Developmental Biology 144, 172, Physiological Science 125, Statistics 100A, 100B. Eight units of either Bioinformatics 199 or Computer Science 194 or 195 may be applied as an elective by petition.

Students are strongly encouraged to take Computer Science M184 as early as possible to obtain an overview of computational biology.

A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor. If students complete some of the minor requirements as part of their major program, they can take additional courses from the bioinformatics elective course list.

All minor courses must be taken for a letter grade, and students must have a minimum grade of C (2.0) in each and an overall C average. 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://grad.ucla.edu/gasaaa /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 Computer Science offers Master of Science (M.S.) and Doctor of Philosophy (Ph.D.) degrees in Computer Science. A concurrent degree program (Computer Science M.S./Management M.B.A.) is also offered.

Bioinformatics

Upper Division Course

199. Directed Research in Bioinformatics. (2 to 4) Tutorial, six to 12 hours. Limited to juniors/seniors. Supervised individual research under guidance of faculty mentor. Culminating paper required. May be repeated for credit. Individual contract required. Letter grading.

Computer Science Lower Division Courses

1. Freshman Computer Science Seminar. (1) Seminar, one hour; discussion, one hour. Introduction to department resources and principal topics and key ideas in computer science and computer engineering. Assignments given to bolster independent study and writing skills. Letter grading.
2. Great Ideas in Computer Science. (4) Lecture, four hours; outside study, eight hours. Broad coverage for liberal arts and social sciences students of the major ideas in computer science theory, technology, and implications, including artificial and neural machine intelligence, computability limits, virtual reality, cellular automata, artificial life, programming languages survey, and philosophical and societal implications. P/NP or letter grading.


33. Introduction to Computer Organization. (5) Lecture, four hours; discussion, two hours; outside study, nine hours. Enforced requisite: course 32. Introduction to computer architecture, assembly language, and operating systems fundamentals. Number systems, machine language, and assembly language. Procedure calls, stacks, interrupts, and traps. Assemblers, linkers, and loaders. Operating systems concepts: processes and process management. Input/output (I/O) programming. Memory management. Process synchronization. File systems: layout, performance, and virtual memory. Scheduling, processes and threads; address spaces, memory management; virtual memory. Operating systems 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, with emphasis on thin clients such as PDAs and smart phones. Introduction to mesh-based and tree-based topologies for live streaming, with emphasis on key areas of peer selection metrics and illustration of common optimization techniques (peer capacity, network delay). Hands-on approach to guide students to development of a peer-to-peer experimental system on PlanetLab. Letter grading.

M117. Computer Networks: Physical Layer. (4) (Same as Electrical Engineering M117) Lecture, four hours; discussion, two hours; laboratory, two hours; outside study, six hours. Enforced requisites: courses 31, 33, 35L. Enforced prerequisite: course 142. Object-oriented, systems management view of computer networks, IP addressing, and routing concepts. Introduction to fundamental computer communication concepts underlying and supporting modern networks, with focus on wireless communication media and access layer networks of the protocol stack. Systems include wireless LANs (IEEE802.11) and ad hoc wireless and personal area networks (e.g., Bluetooth, ZigBee). Experimental project based on wireless controlled devices (smart phones, tablets, etc.) as sensor platforms for personal applications such as wireless health, positioning, and environment awareness, and experimental laboratory sessions included. Letter grading.

118. Computer Network Fundamentals. (4) Lecture, four hours; discussion, two hours; outside study, six hours. Enforced requisites: courses 32, 33, 35L, 111. Designed for juniors/seniors. Introduction to design and performance evaluation of computer networks, including such topics as what protocols are layered network architecture, Internet protocol architecture, network transport protocols, routing algorithms and protocols, internetworking, congestion control, and link layer protocols including Ethernet and wireless channels. Letter grading.


121. Introduction to Bioinformatics. (4) (Same as Chemistry CM160A) Lecture, four hours; discussion, two hours. Enforced requisites: course 32 or Program in Computing 10C with grade of C– or better, and Biostatistics 100A or 110A or Mathematics 170A or Statistics 100A. Prior knowledge of biology not required. Designed for engineering students as well as students from biological sciences and medical school. Introduction to bioinformatics and methodology, with emphasis on inventing new computational and statistical techniques to analyze biological data. Focus on sequence analysis and alignment algorithms. Concurrently scheduled with course CM222.

CM122. Algorithms in Bioinformatics and Systems Biology. (4) (Same as Chemistry CM160B) Lecture, four hours; discussion, two hours. Recommended requisites: course 32 or Program in Computing 10C with grade of C– or better, and Biostatistics 100A or 110A or Mathematics 170A or Statistics 100A. Course CM121 is not requisite to CM122. Designed for engineering students as well as students from biological sciences and medical school. Development and application of computational approaches to biological questions, with focus on formulating interdisciplinary problems as computational problems and then solving these problems using algorithmic techniques.

Computational techniques include those from statistics and computer science. Concurrently scheduled with courses M171L and CM222.

CM124. Computational Genetics. (4) (Same as Human Genetics CM124) Lecture, four hours; discussion, two hours; outside study, six hours. Requisites: course 32 or Program in Computing 10C with grade of C– or better, and Biostatistics 100A or 110A or Mathematics 170A or Statistics 100A. Designed for engineering students as well as students from biological sciences and medical school. Introduction to computational and statistical techniques and computational interdisciplinary research in genetics. Topics include introduction to genetics, identification of genes involved in disease, inferring human population histories, and applications such as wireless health, positioning, and traffic control. Letter grading.

113. Operating Systems Principles. (5) Lecture, four hours; laboratory, two hours; outside study, six hours. Enforced requisites: courses 32, 33, 35L. Basic concepts in design and implementation of computer systems, particularly open-source tools and environments, particularly computer science courses. Letter grading.

133. Compiler Construction. (4) Lecture, four hours; discussion, two hours; outside study, six hours. Enforced requisites: courses 32, 33, 35L. Basic concepts in design and implementation of computer systems, particularly open-source tools and environments, particularly computer science courses. Letter grading.

132. Operating Systems. (5) Lecture, four hours; discussion, two hours; laboratory, two hours; outside study, six hours. Enforced requisites: courses 32, 33, 35L. Basic concepts in design and implementation of computer systems, particularly open-source tools and environments, particularly computer science courses. Letter grading.

131. Programming Languages. (4) Lecture, four hours; laboratory, two hours; outside study, six hours. Enforced requisites: courses 32, 33, 35L. Basic concepts in design and implementation of computer systems, particularly open-source tools and environments, particularly computer science courses. Letter grading.

135A. Logic Design of Digital Systems. (4) (Same as Electrical Engineering M16) Lecture, four hours; discussion, two hours; outside study, six hours. Enforced requisites: courses 32, 33, 35L. Designed for seniors/juniors. Introduction to design and performance evaluation of computer networks, including such topics as what protocols are layered network architecture, Internet protocol architecture, network transport protocols, routing algorithms and protocols, internetworking, congestion control, and link layer protocols including Ethernet and wireless channels. Letter grading.

135L. Software Construction Laboratory. (2) Laboratory, four hours; outside study, two hours. Enforced requisite: course 31. Fundamentals of commonly used software tools and environments, particularly open-source tools and environments, particularly computer science courses. Letter grading.

135A. Logic Design of Digital Systems. (4) (Same as Electrical Engineering M16) Lecture, four hours; discussion, two hours; outside study, six hours. Enforced requisites: courses 32, 33, 35L. Designed for seniors/juniors. Introduction to design and performance evaluation of computer networks, including such topics as what protocols are layered network architecture, Internet protocol architecture, network transport protocols, routing algorithms and protocols, internetworking, congestion control, and link layer protocols including Ethernet and wireless channels. Letter grading.

135L. Software Construction Laboratory. (2) Laboratory, four hours; outside study, two hours. Enforced requisite: course 31. Fundamentals of commonly used software tools and environments, particularly open-source tools and environments, particularly computer science courses. Letter grading.

136. Introduction to Computer Security. (4) Lecture, four hours; discussion, two hours; outside study, six hours. Enforced requisites: courses 32, 35L, 131, 181. Compiler structure; lexical and syntactic analysis; semantic analysis and code generation; theory of parsing. Letter grading.


144. Web Applications. (4) Lecture, four hours; discussion, two hours; outside study, six hours. Enforced requisite: course 143. Important concepts and theory for building effective and safe Web applications and first-hand experience with basic tools. Topics include HTML, Web architecture, XML, and XML query language, mapping between XML and relational
models, information retrieval model and theory, security and user model, Web services and distributed transaction topics in natural language processing, expert systems including predicate logic, production systems, state-space and problem reduction algorithms. Introduction to computability. Letter grading.


152B. Digital Design Project Laboratory. (4) Labo- ratory, four hours; discussion, two hours; outside study, six hours. Enforced requisite: course M151B or Electrical Engineering 183EW. Hands-on design, implementation, and debugging of digital logic circuits, use of computer-aided design tools for schematic capture and simulation, implementation of complex circuits using programmed array logic design projects. Letter grading.

161. Fundamentals of Artificial Intelligence. (4) Lecture, four hours; laboratory, two hours; outside study, six hours. Enforced requisite: course 32. Intro- duction to fundamental problem solving and knowl- edge representation. Introduction to Lisp with regular programming assignments. State-space and problem reduction methods, brute-force and heuristic search, planning techniques. Knowledge structures including predicate logic, production systems, semantic nets and primitives, frames, scripts. Special topics in natural language processing, expert systems, vision, and parallel architectures. Letter grading.


M171L. Data Communication Systems Laboratory. (2 to 4) (Same as Electrical Engineering M171L) Lab- oratory, four to eight hours; outside study, two to four hours. Recommended preparation: course M152A. Limited to seniors. Not open to students with credit for course 171L. Investigation of analog and digital aspects of computer communication systems and technologies. Analysis of digital communication systems and protocols through construction of laboratory experiments. Letter grading.


174B. Introduction to Computer Graphics: Three- Dimensional Photography and Rendering. (4) Lect- ure, four hours; discussion, two hours; outside study, six hours. Enforced 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 and three-dimensional models of unparalleled detail and realism. Applications of techniques from entertain- ment (reverse engineering and postproduction of movies, realistic synthetic objects and characters) to medicine (modeling of biological struc- tures from imaging data), mixed reality (augmentation of video), and security (visual surveillance). Funda- mental analytical tools for modeling and inferring geo- metric (shape) and photometric (reflectance, illumina- tion) properties of objects and scenes, and for render- ing and manipulating novel views. Letter grading.

C174C. Computer Animation. (4) Lecture, four hours; discussion, two hours; outside study, six hours. Enforced requisite: course 174A. Designed for juniors/seniors. Introduction to computer animation, including basic principles of modeling, forward and inverse dy- namics, motion capture animation techniques, phys- ics-based animation of particles and systems, and motor control. Concurrently scheduled with course C274C. Letter grading.

180. Introduction to Algorithms and Complexity. (4) Lecture, four hours; discussion, two hours; outside study, six hours. Enforced requisites: course 32, and Mathematics 61 or 180. Introduction to algorithms and complexity. Design techniques: divide- and-conquer, greedy method, dynamic programming; selection of prototypical algorithms; analysis of data structures and representations; complexity measures: time, space, upper, lower bounds, asymptotic com- plexity; NP-completeness. Letter grading.


183. Introduction to Cryptography. (4) Lecture, four hours; discussion, two hours; outside study, six hours. Preparation: knowledge of basic probability theory. Enforced requisite: course 180. Introduction to cryptography, computer security, and basic concepts and techniques. Topics include: foundations of number theory, one-way functions, hard-core bits, pseudorandom generators, pseudorandom functions and pseudorand- dom permutations, semantic security, public-key and private-key cryptographic systems, homomorphic encryption, private information retrieval and voting protocols, message authentication, digital signatures, interactive proofs, zero-knowledge proofs, collision-resistant hash functions, commitment protocols, and two-party secure computation with static security. Letter grading.

M184. Introduction to Computational and Systems Biology. (2) (Formerly numbered M186A.) (Same as Bioengineering CM186 and Computational and Systems Biology M186.) Lecture, two hours; outside study, two hours. Corequisites. Electrical Engineering 102. Dynamic modeling and simulation of complex biological and computer simulation methods for studying biological/ biomedical processes and systems at multiple levels of organization. Control system, multicompartment, pharmacokinetic, pharmacodynamic (PD) and other structural modeling methods applied to life sciences problems at molecular, cellular (biochemical pathways/networks), organ, and organ- ism/systems levels. Both theory and computer laboratory assignments. Letter grading.

CM186. Computational Systems Biology: Model- ing and Simulation of Biological Systems. (6) (For- merly numbered CM186B.) (Same as Bioengineering CM186 and Computational and Systems Biology M186.) Lecture, four hours; laboratory, three hours; outside study, eight hours. Corequisite. Electrical Engineering 102. Dynamic modeling and simulation of complex biological and computer simulation methods for studying biological/ biomedical processes and systems at multiple levels of organization. Control system, multicompartment, pharmacokinetic, pharmacodynamic (PD) and other structural modeling methods applied to life sciences problems at molecular, cellular (biochemical pathways/networks), organ, and organ- ism/systems levels. Both theory and computer laboratory assignments. Letter grading.

C188. Special Courses in Computer Science. (4) Lecture, four 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 Sci- ence. (4) Seminar, four hours; outside study, eight hours. Designed for undergraduate students who are part of research group. Discussion of research meth- ods and current literature in field or of research of fac- ulty member 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. Culuminating paper or project required. May be repeated for credit with school approval. Individual contract required; enrollment petitions available in Office of Academic and Student Affairs. Letter grading.

Graduate Courses

201. Computer Science Seminar. (2) Seminar, four hours; outside study, two hours. Designed for gradu- ate computer science students. Seminars on current research topics in computer science. May be repeat- ed for credit. S/U grading.
202. Advanced Computer Science Seminar. (4) Seminar, four hours; outside study, eight hours. Preparation: completion of major field examination in computer science. Current computer science research into theory of, analysis and synthesis of, and applications of information processing systems. Each member completes one tutorial and one or more original papers on specially selected area. 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. Prerequisites: course 112. Designed for graduate students. In-depth study of network protocol and systems software design in area of wireless and mobile Internet. Topics include key protocols: design philosophy of TCP/IP, end-to-end arguments, and protocol design principles; (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.


212B. Queuing Applications: Scheduling Algorithms and Queueing Networks. (4) Lecture, four hours; outside study, eight hours. Prerequisite: course 212A. Priority queuing. Applications to time-sharing scheduling algorithms: FB, Round Robin, Conservation Law Bounds. Queueing networks: definitions; job flow balance; product form solutions — local balance, M/M/1; algorithmic computations for performance measures; asymptotic behavior and bounds; approximation techniques — diffusion — iterative techniques; applications. Letter grading.

M213A. Embedded Systems. (4) (Same as Electrical Engineering M202A.) Lecture, four hours; outside study, eight hours. Prerequisite: course 111. Designed for graduate computer science and electrical engineering students. Methodologies and technologies for design of embedded systems. Topics include hardware and software architectures; information processing systems; techniques for modeling and specification of system behavior, software organization, real-time operating system scheduling, real-time communication and packet scheduling, low-power battery and energy-aware system design, timing synchronization, fault tolerance and debugging, and techniques for hardware and software architecture optimization. Theoretical foundations as well as practical design methods. Letter grading.

M213B. Energy-Aware Computing and Cyber-Physical Systems. (4) (Same as Electrical Engineering M202B.) Lecture, four hours; outside study, eight hours. Prerequisites: course M21A or Electrical Engineering M16. Recommended: courses 111, and M151B or Electrical Engineering M116C. System-level management and cross-layer methods for power and energy conservation and communication at various scales ranging across embedded, mobile, personal, enterprise, and data-center scale. Computing, networking, sensing, and control technologies and applications; energy sustainability in human-cyber-physical systems. Topics include modeling of energy consumption, energy sources, and energy storage; dynamic power management; power-performance scalability and energy proportionality; energy cycling; power-aware scheduling; low-power protocols; battery modeling and management; thermal management; sensing of power consumption. Letter grading.

214. Data Transmission in Computer Communications. (4) Lecture, four hours; outside study, eight hours. Prerequisites: course 2112. Link-level design. Letter grading.

215. Computer Communications and Networks. (4) Lecture, four hours; outside study, eight hours. Prerequisite: course 112. Resource sharing; computer traffic characterization; multiplexing; network structure; packet switching; packet switching techniques; ARPANET and other computer network examples; network delay and analysis; network design and optimization; network protocols; routing and flow control; satellite and ground radio packet switching; local networks; commercial network services and architectures. Optional topics include extended error control techniques; modern; SDLC, HDLC, X.25, etc.; protocol verification and measurement; integrated networks; communication processors. Letter grading.

216. Distributed Multiaccess Control in Networks. (4) Lecture, four hours; outside study, eight hours. Prerequisites: courses 116 and M151B. Topics from field of distributed control and access in computer networks, including terrestrial distributed computer networks; satellite packet switching; ground radio packet switching; local network architecture and control. Letter grading.

217A. Internet Architecture and Protocols. (4) Lecture, four hours; outside study, eight hours. Prerequisite: course 118. Focus on mastering existing core set of Internet protocols, including IP; core transport protocols, routing protocols, DNS, NTP, and security protocols such as DSNSEC, to understand principles behind design of protocols, appreciate the protocol tradeoffs, and learn lessons from their operations. Letter grading.

217B. Advanced Topics in Internet Research. (4) Lecture, four hours; outside study, eight hours. Requisite: course 211A. 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 on routing protocols, transport protocols, network measurements, network security protocols, and clean-slate approach to network architecture design. Fundamental issues in network protocol design and implementation. 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 interests. Students report on selected topics. May be repeated for credit with consent of instructor. Letter grading.

CM221. Introduction to Bioinformatics. (4) (Same as Bioinformatics M260A, Chemistry CM260A, and Human Genetics M260A.) Lecture, four hours; discussion, two hours. Recommended prerequisites: course 32 or Program in Computing 10C with grade of C– or better, and Biostatistics 100A or 110A or Mathematics 170A or Statistics 100A. Prior knowledge of biology not required. Designed for engineering students, as well as students from biological sciences and medical school. Introduction to bioinformatics and methodological emphasis on concepts and inventing new computational techniques to analyze biological data. Focus on sequence analysis and alignment algorithms. Concurrently scheduled with course CM121. S/U or letter grading.

CM222. Algorithms in Bioinformatics and Systems Biology. (4) (Same as Bioinformatics M260B and Chemistry CM260B.) Lecture, four hours; discussion, two hours. Recommended prerequisites: course 32 or Program in Computing 10C with grade of C– or better, and Biostatistics 100A or 110A or Mathematics 170A or Statistics 100A. Course CM221 is not requisite to CM222. Design for engineering students as well as students from biological sciences and medical school. Development and application of computational methods to biological problems, focusing on formulating interdisciplinary problems as computational problems and then solving these problems using algorithmic techniques. Computational techniques include those from statistics and computer science. Concurrently scheduled with course CM122. Letter grading.

CM224. Computational Genetics. (4) (Same as Bioinformatics M224 and Human Genetics CM224.) Lecture, four hours; discussion, four hours; outside study, eight hours. Prerequisites: course 32 or Program in Computing 10C with grade of C– or better, and Biostatistics 100A or 110A or Mathematics 170A or Statistics 100A. Design for engineering students as well as students from biological sciences and medical school. Introduction to computational analysis of genetic variation and computational interdisciplinary research in genomics. Topics include genetic variation and computational interdisciplinary research in genomics, identification of genes involved in disease, inferring human population history, technologies for obtaining genetic information, and genetic sequencing. Focus on formulation of problems as computational problems and then solving these problems using computational techniques from statistics and computer science. Concurrently scheduled with course CM124. Letter grading.

CM229S. Seminar: Current Topics in Bioinformatics. (4) (Same as Biological Chemistry M229S and Human Genetics M229S.) Seminar, four hours; outside study, eight hours. Prerequisites: courses 131, 181. Paradigms, models, frameworks, and problem solving; UML and metamodeling; basic information and axiomatic systems; domain theory; least fixed point theory; well-founded induction. Logical models: sentences, axioms and rules, normal forms, derivation and proof, models and semantics, proof tools, logical inference, proof-tree logic, features of logic programming. Functional models: expressions, equations, evaluation; combinators; lambda calculus; functional programming. Program models: perception, description, and visualization; inference logic, object models, standard templates, design patterns, frameworks. Letter grading.

231. Types and Programming Languages. (4) Lecture, four hours; outside study, eight hours. Prerequisite: Course 131. Introduction to computer systems and their usage in programming language design and software reliability. Operational semantics, simply-typed lambda calculus, type soundness proofs, types for code reference, types for exceptions. Parametric polymorphism, let-bound polymorphism, polymorphic type inference. Types for objects, subtyping, combining parametric polymorphism and subtyping. Types for modules, parameterized modules, Formal systems of specification and implementation of variety of type systems, as well as readings from recent research literature on modern applications of type systems. Letter grading.
M258C. LSI in System Design. (4) (Same as Electrical Engineering M216C.) Lecture, four hours; laboratory, four hours; outside study, four hours. Req- uisites: course 115. LSI/VLSI design and tool appli- cation in computer systems. In-depth studies of VLSI ar- chitectures and VLSI design tools. Letter grading.

258E. Foundations of VLSI CAD Algorithms. (4) Lecture, four hours; outside study, eight hours. Prepa- ration: computer architecture and analysis and design of algo- rithms. Basic theory of combinatorial optimization for VLSI physical layout, including mathematical pro- gramming, network flows, matching, greedy and heuris- tic algorithms, and stochastic methods. Requisites: on practical application to computer-aided physical design of VLSI circuits at high-level phases of layout: partitioning, placement, graph folding, floorplanning, and global routing. Letter grading.

258F. Physical Design Automation of VLSI Sys- tems. (4) Lecture, four hours; outside study, eight hours. Detailed study of various physical design auto- mation problems of VLSI circuits, including logic partiti- oning, floorplanning, placement, routing, and global routing: channel and switchbox routing, planar routing and via mini- mization, compaction and performance-oriented layout. Discussion of applications of important problem-solving techniques, such as network flows, Steiner trees, simulated annealing, and generic algorithms. Letter grading.

258G. Logic Synthesis of Digital Systems. (4) Lec- ture, four hours; outside study, eight hours. Requisites: courses M51A, 180. Detailed study of various problems in logic-synthesis synthesis of VLSI digital sys- tems, including two-level Boolean network optimization; multilevel Boolean network synthesis; tech- nology mapping for standard cells and field-programmable gate array (FPGA) designs; retiming for sequential circuits; and applications of binary decision di- visions for digital VLSI design. Letter grading.

258H. Analysis and Design of High-Speed VLSI Inter- connects. (4) Lecture, four hours; outside study, eight hours. Requisites: courses M258A, 258F. De- tailed study of various problems in analysis and de- sign of high-speed VLSI interconnects between all inte- grated circuit (IC) and packaging levels, including inter- connect capacitance and resistance, lossless and lossy transmission lines, cross-talk and power distri- bution; correlation between IC design and interconnect models, interconnect topology and geometry optimi- zation, 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 computer science system design in which instructor has developed special proficiency as con- sequence of research interests. Students report on selected 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 theorem, VC dimension, online learning, no-regret learning, online convex optimization, ensemble methods and boosting, 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 un- certainty in reasoning systems; presentation of com- prehensive introduction to Bayesian reasoning using belief networks representation. Letter grading.


262C. Current Topics in Causal Modeling, Infer- ence, and Reasoning. (4) (Same as Statistics M241.) Lecture, four hours; outside study, eight hours. Requi- site: one graduate probability or statistics course such as course 262A, Statistics 200B, or 202B. Re- view of Bayesian networks, causal Bayesian net- works, and structural equations. Learning causal structures from data. Identifying causal effects. Co- variate selection and instrumental variables in linear and nonparametric models. Simpson paradox and confounding control. Logic and algorithmization of counterfactuals and noncounterfactuals. Direct and indirect effects. Probabilities of causation. Identifying causes of events. Letter grading.

262Z. Current Topics in Cognitive Systems. (4) Lecture, four hours; outside study, eight hours. Requi- site: course 262A. Additional requisites for each offer- ing announced in advance by department. Theory and implementation of systems that emulate or sup- port human reasoning. Current literature and individu- al 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. Requisites: course 130 or 131 or 161. Introduction to natural language processing (NLP), with emphasis on semantics. Pre- sentation of process models for variety of tasks, in- cluding question answering, paraphrasing, machine translation, word-sense disambiguation, narrative and editorial comprehension. Examination of both sym- bolic and statistical approaches to language process- ing and acquisition. Letter grading.

263B. Connectionist Natural Language Process- ing. (4) Lecture, four hours; outside study, eight hours. Requisites: course 130 or 131 or 161. Introduction to natural language processing (NLP), with emphasis on semantics. Pre- sentation of process models for variety of tasks, in- cluding question answering, paraphrasing, machine translation, word-sense disambiguation, narrative and editorial comprehension. Examination of both sym- bolic and statistical approaches to language process- ing and acquisition. Letter grading.

263C. Animats-Based Modeling. (4) Lecture, four hours; outside study, eight hours. Requisite: course 130 or 131 or 161. Animats are mobile/sensing ani- mal-like software agents embedded in simulated dy- namic environments. Emphasis on modeling: goal- oriented behavior via neurocontrollers, adaptation via reinforcement learning, and programming. Learning-based tasks include foraging, mate finding, predation, navigation, predator avoidance, cooper- ative nest construction, communication, and parenting. Letter grading.

264A. Automated Reasoning: Theory and Appli- cations. (4) Lecture, four hours; laboratory, four hours; outside study, four hours. Requisites: course 161. In- troduction to theory and practice of automated rea- soning using propositional and first-order logic. Top- ics include syntax and semantics of formal logic; al- gorithms for logical reasoning, including satisfiability and entailment; syntactic and semantic restrictions on knowledge bases; effect of these restrictions on ex- pressiveness, compactness, and computational trac- tability; applications of automated reasoning to diag- nosis, planning, design, formal verification, and reli- ability analysis. Letter grading.


266B. Statistical Computing and Inference in Vi- sion and Image Science. (4) (Same as Statistics M241.) Lecture, three hours. Preparation: basic sta- tistics, linear algebra (matrix analysis), computer vi- sion. Introduction to broad range of algorithms for statistical inference and learning that could be used in network, machine vision, and robotics. Topics include markov chain Monte Carlo computing, sequential Monte Carlo methods, belief propagation, partial differential equations. S/U or let- ter grading.

267A. Neural Models. (4) Lecture, four hours; out- side study, eight hours. Designed for graduate stu- dents. Review of major neurophysiological milestones in understanding brain function. Focus on brain theories that are important for modern computer science and, in particular, on models of sensory perception, sensory-motor coordination, and cerebellar and cerebral structure and function. Stu- dents required to prepare papers analyzing research in one area of interest. Letter grading.


268S. Seminar: Current Topics in Computational Neuroscience. (4) Seminar, two hours; outside study, four hours. Design- for students undertaking thesis research. Discussion of major connectionist computing paradigms and under- lying models of biological and physical processes. Examination of past and current implementations of connectionist/ANN architectures with their applications to associative knowledge processing, general multi- sensor pattern recognition including speed and vi- sion, and adaptive robot control. Students required to prepare papers analyzing research in one area of in- terest. Letter grading.


268S. Seminar: Current Topics in Artificial Intelli- gence. (4) Seminar, to be arranged. Review of current literature and research practicum in area of 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; eight hours of lecture, six hours. Required: course 271A. Discussion of advanced topics in simulation of systems characterized by ordinary and partial differential equations. Topics include (among others) simulation languages, dataflow machines, array processors, and advanced mathematical modeling techniques. Topics vary each term. May be repeated for credit with consent of instructor.

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 plants. Letter grading.


273C. Computer Animation. (4) Lecture, four hours; discussion, two hours; outside study, six hours. Enforced 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, physics-based animation of particles and systems, and motor control. Concurrently 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 161. Investigation of important role that concepts from artificial life, emerging discipline that spans computational and biological sciences, may play in construction of advanced computer graphics and vision models for virtual reality, animation, interactive games, active vision, visual sensor networks, medical imaging, and focus on computational 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 and their incorporation into sophisticated, self-animating graphical entities. Specific topics include modeling plants using L-systems, biomechanical simulation and control, behavior, and neural 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. Required 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, parameter and nonparametric learning, clustering, complexity (VC-dimension, MDL, AIC), PCA/ICA/TCA, 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. Required: course 276A or 276B. Topics in human-computer communication: interaction with pictorial models, sound and symbol generation by humans and machines, semanics of data, systems for speech recognition and understanding. Use of speech and text for computer input and output in a Mandarin. Letter grading.

278. 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. Required: course 180. Additional requisites for each offering announced in advance. Selections focus on design, analysis, optimization, and implementation of algorithms; computational complexity and general theory of algorithms; algorithms for particular applications. May be repeated for credit. Letter grading.

280AP. Approximation Algorithms. (4, each) Lecture, four hours; outside study, eight hours. Required: course 180. Background in discrete mathematics helpful. Theoretically sound 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 algorithms: greedy algorithms, 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. Required: course 181 or compatible 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, nondeterminisms, decidability, unsolvable problems, “easy” and “hard” problems, PTIME/NP-TIME. Letter grading.

281D. Discrete State Systems. (4) Lecture, four hours; outside study, eight hours. Recommended requisites: course 181. Finite-state and linear systems transducers, and their generalizations; regular expressions, transduction expressions, realizability; decomposition, synthesis, and design considerations; topics in state and system identification and fault diagnosis, linear circuits, probability concepts, applications in coding, communication, computing, system modeling, and simulation. Letter grading.

282A. Cryptography. (4) (Same as Mathematics M282B.) Lecture, four hours; outside study, eight hours. Introduction to theory of cryptography, stressing rigorous definitions and proofs of security. Topics include notions of hardness, one-way functions, public-key algorithms, pseudorandom functions and pseudorandom permutations, semantic security, public-key and private-key encryption, secret-sharing, message authentication, digital signatures, interactive proofs, zero-knowledge proofs, collision-resistant hash functions, commitment protocols, key-agreement, contract signing, and two-party secure computation with static security. Letter grading.

282B. Cryptographic Protocols. (4) (Same as Mathematics M282B.) Lecture, four hours; outside study, eight hours. Required: course M282A. Consideration of advanced cryptographic protocol design and analysis. Topics include noninteractive zero-knowledge proofs, one-way functions, public key-cryptosystems, semantic security, public-key encryption, including chosen-ciphertext security; secure multiparty computation; distributed systems with dynamic adversary; nonmalleability and computability of secure protocols; software protection; threshold cryptography; identity-based cryptography, private identity 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 with topic change. Letter grading.


284A-284ZZ. Topics in Automata and Languages. (4 each) Lecture, four hours; outside study, eight hours. Required: course 181. Additional requisites for each offering announced in advance. Selections from families of formal languages, grammars, machines, operators; pushdown automata, context-free languages and their generalizations, parsing; multidimensional grammars, developmental systems; machine-based complexity. Subtopics of some current and planned sections: Context-Free Languages (284A). Parsing Algorithms (284P). May be repeated for credit with consent of instructor and topic change. Letter grading.

CM286. Computational Systems Biology: Modeling and Simulation of Biological Systems. (5) (Formerly numbered CM286B.) (Same as Bioengineering CM286.) Lecture, four hours; outside study, eight hours. Required: course 181. Dynamic biosystems modeling and computer simulation methods for studying biological/biomedical processes and systems at multiple levels of organization. Control system, multicompartamental, predator-prey, pharmacokinetic (PK), pharmacodynamic (PD), and other structural modeling methods applied to the sciences problems in molecular, cellular (biochemical pathways/networks), organ, and organ systems. Both theory- and data-driven modeling, with focus on translating concepts and data into mathematical 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 CM186B. Letter grading.
CM287. Research Communication in Computational and Systems Biology. (2 to 4) (Formerly numbered CS Bioengineering 287.) Lecture, four hours; outside study, eight hours. Requirement: course CM286. Closely directed, interactive, and real research experience in active quantitative systems biology research laboratory. Direction on how to focus and maintain interest in scientific community, appropriate to student interests and capabilities. Critiques of oral presentations and written progress reports explain how to proceed with search for research results. Major emphasis on effective research reporting, both oral and written. Concurrently scheduled with course CM187. Letter grading.

287A. Theory of Program Structure. (4) Lecture, four hours; outside study, eight hours. Requirement: course 181. Models of computer programs and their syntax and semantics; emphasis on programs and recursion schemes; equivalence, optimization, correctness, and translatability of programs; expressive power of program constructs and data structures; selected current topics. Letter grading.

288S. Seminar: Theoretical Computer Science. (2) Seminar, two hours; outside study, six hours. Requirement: course 290A. 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 language and automata theory. May be repeated for credit. S/U grading.

289A-289ZZ. Current Topics in Computer Theory. (2 to 12 each) Lecture, four hours; outside study, eight hours. Review of current literature in area of computer theory in which instructor has participated. Special proficiency as consequence of research interests. Students report on selected topics. Letter grading.

290C. Complexity Theory. (4) Lecture, four hours; outside study, eight hours. Diagonalization, polynomial-time hierarchy, PCP theorem, randomness and de-randomization, circuit complexity, attempts and limitations to proving P does not equal NP, average-case complexity, one-way functions, hardness amplification. Problem sets and presentation of previous and original research related to course topics. Letter grading.

290A. Online Algorithms. (4) Lecture, four hours; outside study, eight hours. Requirement: course 180. Introduction to decision making under uncertainty and competitive analysis. Review of current research in online algorithms and problems arising in many areas, such as data and memory management, searching and navigating in unknown terrains, and server systems. Letter grading.

299R. Randomized Algorithms. (4) Lecture, four hours; outside study, eight hours. Basic concepts and design techniques for randomized algorithms, such as probability theory, 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 Bioengineering M296A and Medicine M270C.) Lecture, four hours; outside study, eight hours. Requirement: Electrical Engineering 141 or 142 or Mathematics 115A or Mechanical and Aerospace Engineering 171A. Development of dynamic systems modeling methodology for physiological, biomedical, pharmacological, chemical, and related systems. Control system, multicompartamental, noncompartamental, and input/output models, linear and nonlinear. Emphasis on model applications, limitations, and relevance in biomedical sciences and other limited data environments. Problem solving in P. Lecture. Letter grading.

M296B. Optimal Parameter Estimation and Experiment Design for Biomedical Systems. (4) (Same as Bioengineering M296B, Biomatics M270, and Medicine M270D.) Lecture, four hours; outside study, eight hours. Requirement: course CM286 or M296A. Biomatics 220. Estimation methodology and model parameter estimation algorithms for fitting dynamical system models to biomedical data. Model discrimination methods. Theory and algorithms for developing and quantifying models, with special focus on optimal sampling schedule design for kinetic models. Exploration of PC software for model building and optimal experiment design via applications in physiology and pharmacology. Letter grading.


M296D. Introduction to Computational Cardiology. (4) (Same as Bioengineering M296D.) Lecture, four hours; outside study, eight hours. Requirement: course CM186. Introduction to mathematical modeling and computer simulation of cardiac electrophysiological processes, 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.

296R. Research Seminar: Computer Science. (2 to 4) Seminar, two to four hours; outside study, four to eight hours. Designed for graduate computer science students. Discussion of advanced topics and current research in algorithmic processes that describe and transform information: theory, analysis, design, efficiency, implementation, and application. May be repeated for credit. S/U grading.

375. Teaching Apprentice Practicum. (1 to 4) Seminar, to be arranged. Preparation: apprentice personnel employment as teaching assistant, associate, or fellow. Teaching apprenticeship under active guidance and supervision of regular faculty member responsible for curriculum and instruction at UCLA. May be repeated for credit. S/U grading.

495. Teaching Assistant Training Seminar. (2) Seminar, two hours; outside study, four hours. Limited to graduate Computer Science Department students. Seminar on communication of computer science material in classroom: preparation, organization of material, presentation, use of visual aids, grading, advising, and rapport with students. S/U grading.

495B. 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 classrooms. S/U grading.

497D-497E. Field Projects in Computer Science. (4-4) Fieldwork, to be arranged. Students are divided into teams led by instructor; each team is assigned one external company or organization that they investigate as candidate for possible computerization, submitting team report of their findings and recommendations. In Progress (497D) and S/U or letter (497E) grading.

596. Directed Individual or Tutorial Studies. (1 to 8) Tutorial, to be arranged. Limited to graduate computer science 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 Ph.D. 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.

597B. Preparation for Ph.D. Preliminary Examinations. (2 to 16) Tutorial, to be arranged. Limited to graduate computer science students. Preparation for Ph.D. preliminary examinations. S/U grading.
to effective working practices in the future. The three-year graduate program is a collaborative venture with the Getty Trust and is based in specifically designed facilities at the Getty Villa in Malibu.

The aim of the program is to provide students with a solid educational base and practical training in the conservation of both archaeological and ethnographic materials, as well as an appreciation of the cultural complexity related to significance, access, and use of these materials that can be very different from the criteria for conservation of fine art or historical materials. The special focus of the program and its interdisciplinary curriculum serves the archaeological, scientific, native, and cultural minority communities alike and offers a nexus at the boundaries of conservation, archaeology, ethnography, the natural sciences, and engineering.

The partnership between UCLA and the Getty in creating this 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, other local museums and cultural organizations, and different departments and programs at UCLA, including but not limited to the Departments of Anthropology, Art History, Chemistry and Biochemistry, Earth and Space Sciences, and Materials Science and Engineering, 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://grad.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 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

Upper Division Courses

C120. Field Methods in Archaeological Conservation: Readiness, Response, and Recovery. (4) Lecture, two hours; laboratory, three hours. Overview of risks (direct and indirect) and materials vulnerability of in situ cultural heritage and movable archaeological materials in emergency situations (rescue excavations, disasters, conflicts), with emphasis on readiness, first aid response, and recovery. Readiness focuses on preparedness and preventive measures, including reburials, shelters, rescue excavations, and documentation as well as development and implementation of awareness campaigns. First aid response covers development of on-site emergency risk assessments to evaluate damage and putting triage theory into practice, salvage rescue operations, emergency temporary in situ stabilization and protection (using locally available materials), and training. Recovery is based on documentation, lifting methods, handling, transportation, and storage. Emphasis on finding practical solutions to prevent and mitigate damage and to recover and safeguard archaeological artifacts. Concurrently scheduled with course C210. Letter grading.

C142. Managing Collections for Museums, Libraries, and Archives. (4) Lecture, two hours; activity, two hours. How conservators work together with curators, collections managers, mount makers, designers, and registrars to manage collections to be both accessed and preserved. Concurrently scheduled with course C242. Letter grading.

Graduate Courses


M215. Cultural Materials Science I: Analytical Imaging and Documentation in Conservation of Materials. (4) (Same as Art History M204A.) Lecture, two hours; laboratory, two hours. Basic and advanced techniques on digital photography, computer-aided recording tools, and scientific imaging to determine and document condition (defects) and technological features of archaeological and ethnographic materials. Development of basic theoretical knowledge on imaging and photonics technology and practical skills on conservation photo-documentation, analytical (fo- rensic) photography, and advanced new imaging technologies. Letter grading.

M216. Science of Conservation Materials and Methods I (4) (Same as Materials Science M216.) Seminar, one hour; laboratory, nine hours. Recommended requisite: Materials Science 104. Introduction to physical, chemical, and mechanical properties of conservation materials (defects) and technological features of archaeological and cultural materials, and their aging characteristics. Science and application of methods of traditional organic and inorganic systems and introduction of novel technology based on biomimeralization processes and nanostructured materials. Letter grading.

C220. Field Methods in Archaeological Conservation: Readiness, Response, and Recovery. (4) Lecture, two hours; laboratory, three hours. Overview of risks (direct and indirect) and materials vulnerability of in situ cultural heritage and movable archaeological materials in emergency situations (rescue excavations, disasters, conflicts), with emphasis on readiness, first aid response, and recovery. Readiness focuses on preparedness and preventive measures, including reburials, shelters, rescue excavations, and documentation as well as development and implementation of awareness campaigns. First aid response covers development of on-site emergency risk assessments to evaluate damage and putting triage theory into practice, salvage rescue operations, emergency temporary in situ stabilization and protection (using locally available materials), and training. Recovery is based on documentation, lifting methods, handling, transportation, and storage. Emphasis on finding practical solutions to prevent and mitigate damage and to recover and safeguard archaeological artifacts. Concurrently scheduled with course C120. Letter grading.

222. Conservation and Ethnography. (4) Laboratory, two hours; activity, four hours. How conservators work together with curators, collections managers, mount makers, designers, and registrars to manage collections to be both accessed and preserved. Concurrently scheduled with course C242. Letter grading.

Students learn different models for tribal museums and cultural centers, and importance of material selection and properties in baskets they are treating. Letter grading.

224. 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 reflects real case-study 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 cultural heritage and conditions leading to development of risk assessments to address physical risks in milieu of site preservation management, including visitors’ organization, urban development, socioeconomic growth, and tourism. Letter grading.


232. Deterioration and Conservation of Organic Materials I. (4) Seminar, two hours; laboratory, three hours. Recommended requisite: Archaeology C210. 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, plaster, and rubber. Letter grading.


238. Deterioration and Conservation of Organic Materials II. (4) Seminar, two hours; laboratory, three hours. Requisite: course 232, Archaeology C210. 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 include plant and animal fibers, feathers, and quills. Letter grading.

239. Conservation of Inorganic Materials III: Metals. (4) Seminar, 90 minutes; laboratory, four hours. Introduction to conservation problems of metallic artifacts made of iron, steel, cast iron, gold, zinc, and aluminum that have some importance in ethnographic objects. Discussion of problems in conservation treatment of composite metal-organic artifacts, along with practical work on metallic artifacts. Letter grading.

M240. Environmental Protection of Collections for Museums, Libraries, and Archives. (4) (Same as Information Studies M238.) Lecture, two hours; laboratory, two hours. Requisite: Information Studies 432. Designed for graduate conservation students. 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 of materials sensitivities, along with protective measures for collections. Letter grading.
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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.
exploration of a topic, culminating in a final ex-
hibition of work.

Facilities and equipment in the department en-
able students to create work in two, three, and
four dimensions. They expand opportunities for
students to develop interactive media appli-
cations in a networked environment and ad-
vanced computer graphics. The department’s
equipment combines high-end PC and Macin-
tosh computers with facilities for sound and
video editing.

The Department of Design | Media Arts re-
serves the right to hold for exhibition purposes
examples of any work done in classes and to
retain for the permanent collection of its galler-
ies such examples as may be selected.

Undergraduate Study

The Design | Media Arts major is a designated
capstone major. Students are required to com-
plete an advanced project of their own that en-
tails full engagement with the design process.
Through their capstone work, students dem-
strate their capacities for research, ide-
ation/concept development, creative and de-
sign direction, communication strategy, de-
sign, production/fabrication, and critical analy-
sis. Capstone courses focus on career choice,
and final projects are showcased at the spring
Senior Show.

Design | Media Arts B.A.

Capstone Major

Preparation for the Major

Required: Design | Media Arts 8, 10, 21, 22, 23,
24, 25, 28.

The Major

Required:

Eleven upper division courses, in-
cluding Design | Media Arts 101, 104, 153,
154, 157, 161, 163, two courses selected from
160, 171, 172, 173, and two capstone courses
selected from 159A, 159B, 159C.

It is recommended that students have each
term’s program approved by the departmental
adviser.

Note: Consult the Schedule of Classes
for courses limited to majors only.

Graduate Study

Official, specific degree requirements are de-
tailed in Program Requirements for UCLA
Graduate Degrees, available at the Graduate
Division website, http://grad.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 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 photogra-
phy skills using digital cameras. Alteration/manipula-
tion of photos using techniques from latest version
of Adobe Photoshop. Uploading of images on Web or in
print. Production of digital and print portfolios of stu-
dent work. Field trips to surrounding West Los Ange-
les locales to shoot photos. May be repeated for
credit without limitation. Offered only as part of Sum-
mer Institute. P/NP grading.

2. Web Design. (2) Studio, 30 hours. Limited to
high school students. How Web design works: basic hand
coding and creation of personalized homepages with
Macromedia Director and Flash software. Photograph
scanning and manipulation of images in Adobe Pho-
toshop to incorporate student Web designs. Critique of
various Web pages to analyze successful use of Web
design and understand enormous potential of
Internet. May be repeated for credit without limita-
tion. 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 digi-
tal games, beginning with storyboard and learning
how to bring game design to life. Creation and anima-
tion of three-dimensional characters and objects by
using Maya, same software used in professional
game developers. Analysis of popular games to un-
derstand what is involved in producing modern
games. Vists 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. Creation of storyboard for
short documentary, commercial, or music video. Stu-
dents shoot and edit their own work by learning fun-
damentals of preproduction and postproduction us-
ing latest digital software, Adobe Premiere and After
Effects, to create their work. Burning of DVD of fin-
ished production. Visits from professional video pro-
ducer to help guide students in creating their own vid-
eos. May be repeated for credit without limitation. Of-
fered only as part of Summer Institute. P/NP grading.

5. Introduction to Design | Media Arts. (4) Studio,
40 hours. Limited to high school students. Two-week
summer course designed to meet needs of high
school students interested in exploring their creative
potential within fields of design media arts, with focus
on concepts of narrative and storytelling. Introduction
to and exploration of variety of media such as graph-
ics, web, game, and video design with goal of combin-
ing and integrating these media to express and realize
their narrative projects. Students work with most cur-
current software and technology in each discipline area,
developing diverse skill sets while cultivating concep-
tual capabilities around storytelling project, and
with experienced instructors and professionals in field
to develop projects utilizing this comprehensive and in-
teractive approach. Cumulates in portfolios that may
be used for college applications. Possible field trips.
May be repeated for credit without limitation. Offered
only as part of Summer Institute. P/NP grading.

6. Art/Science and Technology Studio/Laboratory.
(2) Studio/laboratory, 40 hours. Limited to high
school students. Two-week summer course, including lec-
tures, required screenings, laboratory visits, field trips,
and outside study. Exploration of creative aspects of
scientific research and innovation to gain broad un-
derstanding of impact of science on contemporary art
and popular culture, with focus on new sciences of
biotechnology and nanotechnology. Development of
proposals and ideas that could serve as prototypes
for either art projects or scientific research study.

7. Media Histories. (5) Lecture, three hours; outside
study, 12 hours. Synthethic overview of optical media
and aesthetic movements covering past two centu-
ries: photography and industrialization/Romanticism
(1850 to 1900), cinema and modernism (1900 to
1950), television and postmodernism (1950 to 2000),
and digital media and urbaneism (2000 to 2050). How such
movements can inform generative work and
how understanding these media becomes essen-
tial in emerging era of digital humanities. P/NP or
letter grading.

8. Art, Science, and Technology. (5) Lecture, three
hours; discussion, one hour; outside study, 11 hours.
Exploration and survey of cultural impact of scientific
central to scientific research and innovation to gain
broad understanding of impact of science on
contemporary art and popular culture, with focus on
new sciences of biotechnology and nanotechnology.
Development of proposals and ideas that could serve as prototypes for either
art projects or scientific research study. P/NP grading.

hours; discussion, one hour; outside study, 11 hours.
Exploration and survey of cultural impact of scientific
central to scientific research and innovation to gain
broad understanding of impact of science on
contemporary art and popular culture, with focus on
new sciences of biotechnology and nanotechnology.
Development of proposals and ideas that could serve as prototypes for either
art projects or scientific research study. P/NP or
letter grading.

10. Design Culture. (5) Lecture, three hours; outside
study, 12 hours. Open to nonmajors. Understanding
design process, with emphasis on development of
visual language; study of historic, scientific, technologi-
cal, economic, and cultural factors influencing design
in physical environment. P/NP or letter grading.

11. Color. (4) Studio, six hours. Introduction to theo-
ries of color to understand interdependence and in-
tegration of color and form and color and quantity, color
and placement, and after-image. P/NP or letter grading.

12. Form. (4) Studio, six hours. Internation of two-
dimensional and three-dimensional forms with
traditional and experimental materials as founda-
tion for creativity; origination and solution of prob-
lems. P/NP or letter grading.

13. Drawing. (4) Studio, six hours. Translation of per-
ception through delineation, drawing, and other de-
scriptive media. Emphasis on development of stu-
dents’ motor control by means of freehand and me-
chanical drawing and by development of analytical and
objective observation from life and three-dimen-
sional objects. P/NP or letter grading.

14. Motion. (4) Studio, six hours. Introduction and in-
tegration of traditional design tools, camera, and digi-
tal technologies for application to visual thinking and
fundamentals of design. P/NP or letter grading.

15. Typography. (4) Studio, six hours; outside study,
six hours. Focus on three typographic basics: letter,
text, and grid. Introduction to fundamentals of typog-
raphy. Assignments designed to develop understand-
ing of form, scale, and shape of letters as single ele-
ments and as texture in layout. Emphasis on grid
(structure and layout) and information hierarchy to create successful typographic messages. P/NP or
letter grading.

16. Interaction. (4) Studio, six hours; outside study,
six hours. Introduction to concept of interactivity and
field of media art that follows history of computer
for artistic exploration in relation to print, ani-
mation, 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 creating examples of
media art. Concepts and skills taught enhance stu-
dent ability to excel in future courses about Internet, animation, interactive media, and game design. Dis-
cussion of readings on multimedia, hypertext, pro-
gramming, 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 re-
quired of Design | Media Arts majors. Survey of media
arts, their history, aesthetics, and cultural roles from
late-19th century to present. Investigation of media
arts within broad historical and cultural framework.
Discussion of parallels and links with other cultural
forms, including history of technology and various art
and design practices. P/NP or letter grading.
102. Introduction to Digital Image Creation and Manipulation. (5) Lecture, three hours; outside study, 12 hours. Preparation: completion of preparation for major and course 150. Provides wider understanding of arts that parallels world of 20th-century visual languages. Study of trends that allow viewer to connect story of one art form to another in richer context. Letter grading.

104. Design Futures. (5) Lecture, three hours; outside study, 12 hours. Preparation: completion of preparation for major courses. Open to nonmajors with consent of instructor. Critical examination of design practice and theory of 20th and 21st centuries, incorporating historical as well as speculative methodologies. Consideration of how various design practices and techniques related to each other across cultures and media, with strong emphasis on communication and critical thinking. Letter grading.

153. Video. (5) Formerly numbered 153A. Studio, six hours; outside study, nine hours. Preparation: completion of preparation for major courses. Use of video technology (video systems, cameras, displays, editing, and storage) to integrate image, sound, time, and motion. Emphasis on expression, continuity, and sequential patterns for video communication. P/NP or letter grading.

154. Word + Image. (5) Formerly numbered 154A. Studio, six hours; outside study, nine hours. Preparation: completion of preparation for major courses. Emphasis on relationship between word and image, typography and graphic design. Consideration of how various design practices and techniques related to each other across cultures and media, with strong emphasis on communication and critical thinking. Letter grading.

157. Game Design. (5) Formerly numbered 157A. Studio, six hours; outside study, nine hours. Preparation: completion of preparation for major courses. Enforced requisite: course 101 or 104. Focus on relation of type to content, image, and materials. Acquisition of fundamentals of typography in context of complex communication problems in print and digital media. Research, concept and content development, and articulation of meaning to users. Letter grading.

193. Studio, six hours; outside study, nine hours. Preparation: completion of preparation for major courses. Emphasis on planning and design of game experience, developing games that explore various aspects of game design: rule design, game balance, multiplayer strategy, complexity, randomness, polemics, narrative, physical interaction, and aesthetic and pragmatic aspects of physical game design. P/NP or letter grading.

195A-159B. Capstone Senior Project. (5-5-5) Studio, six hours; outside study, nine hours. Preparation: completion of preparation for major courses. Emphasis on development of honors thesis or comprehensive research project under direct supervision of faculty member. May be repeated once for credit. Individual contract required. Letter grading.

199A-195B. Community or Corporate Internships in Design | Media Arts. (2-4) Tutorial, six and 12 hours. Limited to juniors/seniors. Internship in supervised work in community agency or business related to design. Students meet on regular basis with instructor and provide periodic reports of their experience. Courses 195A and 195B may be repeated for combined maximum of 8 units. Individual contract required with supervising faculty member required. P/NP or letter grading.

198. Honors Research in Design | Media Arts. (4) Tutorial, two hours. Preparation: 3.0 grade-point average overall. Limited to juniors/seniors. Development and completion of honors thesis or comprehensive research project under direct supervision of faculty member. May be repeated once for credit. Individual contract required. Letter grading.

199. Directed Research in Design | Media Arts. (2-8) Tutorial, four hours. Preparation: 3.0 grade-point average in major. Limited to juniors/seniors. Supervision of individual research project under guidance of faculty mentor. Culminating paper or project required. May be taken for maximum of 8 units. Individual contract required. P/NP or letter grading.

200. Design | Media Arts Faculty Seminar. (2) Seminar, two hours. Limited to graduate design | media arts students. Focus on creative process and research in design | media arts. Discussion of course work, student projects, and relevant developments in the field. Letter grading.

201. Network Media. (8) Formerly numbered 161A. Studio, four hours; outside study, nine hours. Preparation: completion of preparation for major and major courses. Selected topics in design and media arts explored through variety of approaches that may include projects, readings, discussions, 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.

202. Mathematical Techniques in Design and Media Arts I. (4) Lecture, three hours. 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. S/U or letter grading.

203. Mathematical Techniques in Design and Media Arts II. (4) Lecture, three hours. Design 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. S/U or letter grading.

204. Programming Computer Applications in Architecture and Urban Design. (4) Same as Architecture and Urban Design M227B. 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.

205. User Interface Design. (4) Same as Architecture and Urban Design M227C. Lecture, three hours; outside study, nine hours. Preparation: 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.

206. Advanced Seminar: Computer Applications. (4) Seminar, three hours. Preparation: course M241 or Architecture and Urban Design M227A. Survey of various roles computers may play in design; development of new applications. Topics include representation and evaluation of current computer-aided design tools. May be repeated for credit with consent of adviser. S/U or 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. S/U or letter grading.
272 / Digital Humanities

through discussions, of fundamental concepts like complexity and randomness. Techniques that organize data, are educational, and create meaningful and/or expressive representations. Letter grading.

269. Graduate Seminar. (4) Seminar, four hours. Designed for graduate design | media arts majors. Survey of critical theories in media art and design. Critical examination of theory by peers, faculty members, and guest experts. Must be taken twice for M.F.A. degree. May be repeated for credit with consent of adviser. Letter grading.

270. Media Arts Theory. (5) Lecture, three hours. Media arts is a 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. 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 | Science. (5) Seminar, three hours. For past 50 years artists have increasingly moved from being inspired by scientific innovation and discovery to actually collaborating with scientists and even residing and working in science laboratories. History of science in relation to artists’ interpretation of scientific work to current works that are created in response to recent developments in biotechnology and nanotechnology. Letter grading.

278. Form and Structure. (2 to 8) Studio or studio/seminar, to be arranged. Examination of form, with emphasis on expressive experimentation in materials and processes. May be repeated for credit with consent of adviser. Letter grading.

288. Special Topics in Design. (2 to 8) Seminar, to be arranged. Examination of specific problems relevant to design theory and performance. Topics announced in advance. May be taken for maximum of 8 units. Letter grading.

375. Teaching Apprentice Practicum. (1 to 4) Seminar, to be arranged. Preparation: apprentice personnel employment as teaching assistant, associate, or fellow. Teaching apprenticeship under active guidance and supervision of regular faculty member responsible for curriculum and instruction at UCLA. May be repeated for credit. S/U grading.

403. Graduate Critique. (2) Seminar, three hours; outside study, three hours. Limited to first- and second-year departmental graduate students. Students meet with instructor in small classroom setting to exchange ideas through presentation of current projects and research, discussion, research papers, and reports. Instructors may invite visiting critics to contribute. May be repeated for credit. S/U grading.

404. Graduate Tutorial. (3) Tutorial, three hours; outside study, six hours. Limited to first- and second-year departmental graduate students. Development of body of work while working toward M.F.A. degree, with one-to-one interaction between students and faculty members. May be repeated for credit. Letter grading.

495. Teaching Assistant Training Practicum. (2) Seminar, three hours; outside study, three hours. Forum for first-year teaching assistants for discussion and exploration of teaching pedagogy and classroom mechanics. Problems and practices of teaching design at college level, as well as role of teaching assistants within department. Designed to help new teaching assistants develop teaching skills and to orient them to department and University policies and resources. May not be applied toward degree requirements. S/U grading.

596. Directed Individual Study or Research. (2 to 8) Tutorial, to be arranged. May be repeated for credit with consent of adviser. S/U or letter grading.


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

UCLA

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Faculty Committee
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Diane G. Favo, Ph.D. (Architecture and Urban Design)
Christopher Johnson, Ph.D. (Classics)
Peter B. Lunenfeld, Ph.D. (Design | Media Arts)
Stephen D. Mamber, Ph.D. (Film Television and Digital Media)
Todd S. Presner, Ph.D. (Comparative Literature, Germanic Languages)
Janice L. Reiff, Ph.D. (History, Statistics)
Francis F. Steen, Ph.D. (Communication Studies)
Willeke Z. Wendrich, Ph.D. (Near Eastern Languages and Cultures)
Matte Zubiareu, Ph.D. (Spanish and Portuguese)

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.digitalhumanities.ucla.edu. To submit an application for the minor, see the website and click on DH Minor.

Required Lower Division Courses (4 to 6 units):

Required Upper Division Courses (27 to 30 units):

A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor.

Each minor course must be taken for a letter grade. Successful completion of the minor is indicated on the transcript and diploma.

Digital Humanities

Upper Division Courses

101. Introduction to Digital Humanities. (5) Lecture, four hours. Discussion, one hour. Foundation course for students in Digital Humanities minor, providing theoretical and conceptual framework for understanding genesis of digital world. Use of contemporary cultural-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.
Advanced Topics in Digital Humanities. (4) Seminar, three hours. Requisite: course 101. Introduction to advanced research methods or thematic issues in digital humanities such as database and visualization technologies, social media applications, application programming interfaces, and digital mapping to acquire familiarity with particular set of technologies by learning practical research methods and theoretical issues to carry out advanced research in this area. Letter grading.

Research Group Seminars: Digital Humanities. (2 to 4) Seminar, two hours. Requisites: course 101. Completion of two or better courses. May be taken concurrently with course 195 or 196. Designed for undergraduates 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 or letter grading.

Community or Corporate Internships in Digital Humanities. (4) Tutorial, two hours: fieldwork, eight hours. Limited to juniors/seniors. May be taken concurrently with course 195. Internship in supervised setting in community agency or business. Placements to be arranged by instructor. Students meet on a 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.

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.

Honors Research in Digital Humanities. (4) Tutorial, one hour. Requisite: course 194. 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.

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.

Introduction to Digital Humanities. (5) Seminar, three hours; laboratory, one hour. Introduction to field of digital humanities. Historical overview of field from its beginning in post-World War II era to present, highlighting major intellectual problems, disciplinary paradigms, and institutional challenges that are posed by digital humanities. Examination of major epistemological, methodological, technological, and institutional challenges posed by digital humanities through number of specific projects that address fundamental problems in creating, interpreting, preserving, and transmitting human cultural record. How digital technologies and tools, ranging from map visualizations and modeling environments to database structures and interface design, are arguments that make certain assumptions about, and even transform, objects of study. Letter grading.

Special Topics in Digital Humanities. (4) Seminar, three hours. Enforced requisite: course 201. Introduction to advanced research method or thematic issues in digital humanities, such as digital textual analysis, digital mapping database and visualization technologies, or social media technologies. Acquisition of familiarity with particular set of technologies by learning practical research methods and theoretical issues to carry out advanced research in this area. Examination of critiques of theoretical underpinnings of such technologies and issues that they raise. May be repeated for credit with topic change. Letter grading.

Special Projects in Digital Humanities. (2 to 4) Tutorial. Enforced requisites: course 101. Limited to and required of graduate students in Digital Humanities Graduate Certificate Program. Supervised research and investigation under guidance of faculty mentor. Culminating project required. May be repeated for maximum of 12 units. Letter grading.

Disability Studies

Interdisciplinary Minor
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Helen Deutsch, Ph.D. (English)
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 emergent 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 the concept and practical implications of disability as well as the length and scope of the final paper or project based on guidelines developed by the faculty committee.

Required Upper Division Capstone Courses (8 to 10 units): Disability Studies 194 with a grade of B or better, and 198 or 199. Prior to enrolling in course 198 or 199, students must complete Disability Studies 194 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.

A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor.

Each minor course must be taken for a letter grade, and students must have an overall grade-point average of 3.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

Disability Studies

Upper Division Courses

101. Perspectives on Disability Studies. (5) Lecture, one hour; discussion, two 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 expe-
120. Topics in Literature and Disability, (5) Seminar, three and one half hours. Limited to juniors/seniors. Ways in which issues of disability are expressed in literature, with particular attention to various roles, positions, and concerns of people with disabilities. Approach 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 autobiographical writing, poetry, drama, as well as themes related to such problems as stigma, gender politics, or intertextual encounters. May be repeated for credit with topic and instructor change. P/NP or letter grading.

150. Human Rights, International Development, and Disability, (4) Lecture, three hours. Basic introduction to theories of human rights, sociology of development, and contemporary rights-based development theory and practice. International disability rights movement to serve as case study, following passage of U.N. Convention on Rights of Persons with Disabilities in 2006 to changes on ground in developing countries that are occurring today. Offered in summer only. P/NP or letter grading.

157. Rechoreographing Disability, (Same as Dance M157.) Seminar, four hours. Through study of range of performance by, featuring, or about people who are disabled, approaches to 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 cultural/cultural idea broadly defined as scored movement and organization of bodies, as well as choreography as poetic form for expression of ideas, creative tool, or product. Viewing and discussion of video performances and embodied ideas through movement and dance-making. P/NP or letter grading.

194. Capstone Research Seminar, (2) Formerly numbered M193. Enforced requisites: course 195CE. Required of students pursuing Disability Studies minors. Integration of off-campus work with academic theories and concepts within field of disability studies. Students report on their internship experiences and analyze relationship between their internship and issues of policy, ethics, systemic responses to community needs, or personal and intellectual transformations. Students identify one faculty mentor and develop proposal for required capstone research project. Letter grading.

195CE. Community and Corporate Internships in Disability Studies, (4) Tutorial, to be arranged; fieldwork, eight to 10 hours. Limited to juniors/seniors. Internship in corporate, governmental, or nonprofit setting coordinated through Center for Community Learning. Students complete weekly written assignments and attend biweekly meetings with graduate student coordinator, and write final research paper. Faculty sponsor and graduate student coordinator construct series of reading assignments that examine issues related to internship site. May be repeated for credit with consent of Center for Community Learning. Individual contract with supervising faculty member required. Letter grading.


199. Senior Project in Disability Studies, (6 to 8) Tutorial, one hour. Enforced requisites: 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 may be repeated for credit. Individual contract required. Letter grading.

Professor

Kevin D. McKeegan, Ph.D., Chair

Faculty

Vassilis Angelopoulos, Ph.D.
Paul M. Davis, Ph.D.
T. Mark Harrison, Ph.D.
Raymond V. Ingersoll, Ph.D.
David K. Jacobs, Ph.D.
David C. Jewitt, Ph.D.
Craig E. Manning, Ph.D.
Kevin D. McKeegan, Ph.D.
William S. Newman, Ph.D.
David A. Paige, Ph.D.
Gilles F. Peltzer, Ph.D.
Edward J. Rhodes, Ph.D.
Bruce A. Runnegar, Ph.D.
Christopher T. Russell, Ph.D.
J. William Schopf, Ph.D.
Laurence C. Smith, Ph.D.
Raymond J. Walker, Ph.D., in Residence
John T. Wasson, Ph.D.
An Yin, Ph.D.
Edward D. Young, Ph.D.

Professors Emeriti
Orson L. Anderson, Ph.D.
Peter Bird, Ph.D.
Friedrich H. Busse, Ph.D.
Donald Carlisle, Ph.D.
Paul J. Coleman, Jr., Ph.D.
Wayne A. Dollase, Ph.D.
Clarence A. Hall, Jr., Ph.D.
David D. Jackson, Ph.D.
Isaac R. Kaplan, Ph.D.
Margaret G. Kivelson, Ph.D.
Robert L. McPherron, Ph.D.
Arthur L. Montana, Ph.D.
Gerhard Deltel, Drer.nat.
Walter E. Reed, Ph.D.
John L. Rosenfield, Ph.D.
Gerald Schubert, Ph.D.
Ronald L. Shreve, Ph.D.

Associate Professors
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Abby Kavner, Ph.D.
Jean-Luc C. Margot, Ph.D.
Edwin A. Schauble, Ph.D.
Axel K. Schmitt, Ph.D., in Residence

Assistant Professors
Caroline D. Beghein, Ph.D.
Jonathan L. Mitchell, Ph.D.
Ulrike Seibt, Ph.D.
Aradhna K. Tripathi, Ph.D.

Scope and Objectives
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 B.S. degrees.

Undergraduate Study
All of the majors offered in the Earth and Space Sciences Department are designated capstone majors. While the specific nature of the capstone experience varies by major, students are required to use skill and knowledge sets from previous coursework to complete a field-based research project from conception to written report. Projects must be placed into context within the current state of understanding, and results are presented at a research symposium or published as a brief report.

Earth and Environmental Science B.A.

Preparation for the Major
Required: Earth and Sciences 1, 5 or 8 or 13 or 15 or 16 or 17 or 20, 51, 61; Chemistry and Biochemistry 114A, 14B, and 14BL, or 20A, 20B, and 20L; Life Sciences 1 and another introductory organicism biology course; Mathematics 3A and 3B, or 31A and 31B; Physics 1A or 6A or 6AH. 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.

Geology/Engineering Geology B.S.

Preparation for the Major
Required: Earth and Science 1 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 20A 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.
Geology/Paleobiology B.S.

Capstone Major

Preparation for the Major

Required: Earth and Space Sciences 1, 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 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


Geophysics/Geophysics and Space Physics B.S.

Capstone Major

Preparation for the Major

Required: Earth and Space Sciences 1, 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; one capstone 199 research course in the senior year; Physics 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 requirements or another minor.

Each minor course must be taken for a letter grade, and students must have an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

Geochemistry Minor

Geochemistry emphasizes use of minerals, magmas, elements, and isotopes to date events, determine rates, and track matter through its cycles in the planets and biosphere. These skills are valuable in environmental and natural-resource work and anthropology, as well as in studying the histories of the planets.

To enter the Geochemistry minor, students must have an overall grade-point average of 2.0 or better.
Geology Minor

Geology is the study of the surface of the Earth and the rocks and processes that created it. Field methods, interpretation of rocks, and modern plate-tectonic models are emphasized, with the goals of finding valuable or hazardous materials and inferring geologic history. These skills are valuable in engineering, urban planning, and environmental and resource studies.

To enter the Geology minor, students must have an overall grade-point average of 2.0 or better.

Required Lower Division Courses (8 to 9 units):
Earth and Space Sciences 1, 61.

Required Upper Division Courses (22 units):
Earth and Space Sciences 112, 119, and three courses from C107, 116, 125, C132, 133, 134, 139, 150.

A minimum of 20 units applied toward the minor must be in addition to units applied toward major requirements or another minor.

Each minor course must be taken for a letter grade, and students must have an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website, http://grad.ucla.edu/gasasa/index.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. (5) Lecture, three hours; laboratory, two hours; field days. Not open to students with credit for or currently enrolled in course 100 or former courses 1F and 1H. Elements of Earth science; study of Earth materials; nature and interpretation of geologic evidence; study of geologic processes; historical aspects of geology. Motion of tectonic plates introduces students to solving of geologic problems in field. P/NP or letter grading.

2. Astrobiology. (5) Lecture, three hours; discussion, one hour; two field days. Origin, evolution, distribution, and future of life on Earth and in universe, parallel major scientific initiative of NASA. Course material primarily from planetary and Earth science, paleontology, biology, astronomy, chemistry, and physics, with relatively little from mathematics. P/NP or letter grading.

3. 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.


6. Earthquakes. (5) Lecture, three hours; laboratory, one hour; one field day. Causes and effects of earthquakes. Plate motion, frictional faulting, earthquake instability, wave propagation, earthquake damage, and other social effects. Hazard reduction through earthquake forecasting and earthquake-resistant design. P/NP or letter grading.

7. Natural Disasters. (5) Lecture, three hours; discussion, one hour; one field day. Global urbanization coupled with historical demographic population shift to coastal areas, especially along Pacific Ocean’s “Ring of Fire,” are placing increasingly large parts of this planet’s human population at risk due to earthquakes, volcanos, and tsunamis. Global climate change combines with geologic processes to create enhanced risks from catastrophic mass movements (e.g., landslides), hurricanes, floods, and fires. Exploration of physical and biogeochemical consequences and natural disasters and discussion of how these natural events affect quality of human life. P/NP or letter grading.

8. Blue Planet: Introduction to Oceanography. (5) Lecture, three hours; laboratory, two hours. Not open for credit to students with credit for or currently enrolled in course 1 or former courses 1F and 1H. Elements of Earth system. P/NP or letter grading.

9. Dinosaurs and Their Relatives. (5) Lecture, three hours; laboratory, two hours. Not open for credit to students with credit for or currently enrolled in course 1 or former courses 1F and 1H. Elements of Earth system. P/NP or letter grading.

10. Geophysics and Planetary Physics Minor

Classical physics, supported by field data, mathematics, and computing, is used to understand diverse processes from ocean circulation and earthquakes to the formation of planets and the flow of particles and electromagnetic fields in space. These skills are valuable in environmental, engineering, and resource studies and more broadly in any kind of career that requires quantitative analysis.

To enter the Geophysics and Planetary Physics minor, students must have an overall grade-point average of 2.0 or better.

Required Lower Division Courses (12 units):
Earth and Space Sciences 1, 8, 9.
Upper Division Courses

100. Principles of Earth Science. (4) Lecture; three hours. Designed for juniors. 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 mountainous regions. Physical and biological evolution. P/NP or letter grading.

101. Earth’s Energy: Diminishing Fossil Resources and Prospects for Sustainable Future. (4) Lecture; three hours; laboratory; two hours; two optional field trips. Preparation: Division atomic physics, 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 lower 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. (5) Lecture; two to three hours; laboratory; six hours; field trips. Enforced requisites: course 51, Chemistry 14B and 14BL, or 20B and 20L, or 3AB. Minerals: crystal and 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 petrological and chemical evolution of Earth and major and minor planets from their origin to present. P/NP or letter grading.

103B. Sedimentary Petrology. (5) Lecture; two to three hours; laboratory; six hours; field trips. Enforced requisites: course 103A. Recommended: course 61. Study of sedimentary rocks based on characteristics of sedimentary particles and dynamics of depositional processes. Lectures focus on development of depositional facies models, and laboratories emphasize recognition of sedimentary deposits from each major depositional facies. P/NP or letter grading.

103C. Metamorphic Petrology. (5) Lecture; two to three hours; laboratory; six hours; field trips. Enforced requisites: 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.

C106. Physical Geochemistry. (4) Lecture; three hours. Principles of physical chemistry for geologic applications. Thermodynamics and kinetics of reactions among minerals, natural waters, and magmas; construction and interpretation of phase diagrams; case studies of important 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. Enforced requisites: courses 61, 103B, Principles of stratigraphy; geologic mapping of selected area; preparation of geologic report. Letter grading.

111G. Field Geology. (2 or 4) Lecture; two hours; laboratory; three hours; fieldwork, one day per week. Designed for graduate students. Geologic mapping, principles of stratigraphy, structural geology, and map interpretation. Designed for graduate students. P/NP or letter grading.

112. Structural Geology. (5) Lecture; three hours; laboratory; six hours. Requisites: courses 1, 61. Recommended: course 51. Planar and linear structures at different scales in sedimentary, metamorphic, and igneous rocks. Faults and folds, their descriptions, classification, and kinematic and dynamic analysis. Deformation, strength, fracture, and rheological properties of rocks. Letter grading.

C113. Biological and Environmental Geochemistry. (4) Lecture; three hours. Requisites: Chemistry 14A and 14B (or 20A and 20B), Mathematics 3A, 3B, and 3C (or 31A and 31B). Recommended: at least one lower division. Earth and space sciences course. In tended for junior/senior level and physical sciences students. Study of chemistry of Earth’s surface environment and interplay between biology, human activity, and geology. Introduction to origin and composition of Earth, including its core, mantle, crust, and hydro sphere. Examination of how these reservoirs are affected by biological cycles and feedbacks to biological evolution and diversity. Local and global-scale movements of chemical elements like carbon, nitrogen, and phosphorus. Concurrently scheduled with course C213. P/NP or letter grading.

116. Paleontology. (4) Lecture; three hours; laboratory; two hours; discussion. Requisite: Life Sciences 1 or 2. Review of major groups of fossils and their significance in geology and biology. P/NP or letter grading.

M118. Advanced Paleontology. (4) (Same as Ecology and Evolutionary Biology M145S.) Lecture; three hours. Requisite: course 116 or Ecology and Evolutionary Biology 110 or 117. Consideration of major factors that have influenced history of life, including analytical approaches to analyzing patterns in fossil record, nature of rock record, and contribution of data from stable isotopes, functional morphology, phylogene nics, and developmental biology. P/NP or letter grading.


120. Rubey Colloquium: Major Advances in Earth Science. (4) Lecture; three hours. Designed for juniors/seniors. Lectures on major advances in Earth science offered by distinguished authorities (including regular faculty members). Supervision of continuity and assessment of student performance by faculty member. Content varies from year to year. If laboratory work is required, content 199 must be taken concurrently. P/NP or letter grading.

121. Advanced Field Geology. (4) Lecture; two hours; laboratory; two hours; three field trips. Requisites: courses 61, 103A, 103B, 111, 112. Problems in regional geology and field research; preparation of written geologic reports. P/NP or letter grading.

122. Advanced Field Geology: Fieldwork. (4) Fieldwork; 20 hours. Advanced techniques in field geologic mapping and preparation of geologic maps and cross-sections, including igneous, metamorphic, and sedimentary terrains. P/NP or letter grading.

125. Volcanoes: (4) Lecture; three hours; laboratory; three field trips. Requisite: course 1 or 1F or 1H. Recommended: course 103A, Physics 1A or 1AH. Types of volcanism. Physiology of magma chambers, volcanic plumbing, explosive and effusive eruptions as illustrated by historical examples. Practical methods of volcano monitoring, with field trip. P/NP or letter grading.

C126. Advanced Igneous Petrology. (4) Lecture; three hours; laboratory; three hours; field trips. Requisite: course 103A. Understanding genesis of igneous rocks based on geochemical, tectonophysical, and other geophysical evidence. Concurrently scheduled with course C226. P/NP or letter grading.


133. Historical and Regional Geology. (4) Lecture; three hours; discussion; two hours; field trips. Requisite course 111. Recommended: courses 103B, 112. Principles of historical geology. Physical evolution of Earth, especially North America. One area of Earth to be investigated in detail, with emphasis on its geologic evolution through time. Letter grading.

134. Computing in Earth and Space Sciences. (4) Lecture; three hours; laboratory; three hours. Preparation: knowledge of Fortran 90 or C++. Original programs and applications to generate and test hypotheses with nonideal or incomplete data sets. Interpolation/extrapolation with graphics to generate hypotheses; forward modeling from fundamental data sets. Propagation testing of models against data. Examples and exercises from Earth and space sciences. Introduction to software used in research and industry. P/NP or letter grading.

135. Introduction to Applied Geophysics. (4) Lecture; three hours; laboratory; three hours; field trips. Preparation: knowledge of Fortran 90 or C++. Requisites: Mathematics 3A, 3B, and 3C, or 31A, 31B, and 32B. Mathematics 1A, 1B, 1C, or 1AH, 1BH, and 1CH, or 6A, 6B, 6C, and 4AL, 4BL. Not open for credit to students with credit for course 136A. Principles and techniques of gravimetric, seismic, magnetic, and other geophysical methods of exploration of subsurface environments, and other economic minerals. P/NP or letter grading.

136A. Applied Geophysics. (4) Lecture; three hours; laboratory; three hours; field trips. Preparation: knowledge of Fortran 90 or C++. Requisites: Mathematics 33A, Physics 1A, 1B, and 1C (or 1AH, 1BH, and 1CH), 4AL, 4BL. Not open for credit to students with credit for course 135. Seismic reflection and refraction, Fou rier and deconvolution, tomography, seismic interferometry. Synthetic seismograms, marine seismics, seismic interpretation, gravity and magnetic fields, inversion uniqueness and depth rules. P/NP or letter grading.

138B. Applied Geophysics. (4) Lecture; three hours; laboratory; three hours; field trips. Preparation: knowledge of Fortran 90 or C++. Requisites: Mathematics 33A, Physics 1A, 1B, and 1C (or 1AH, 1BH, and 1CH), 4AL, 4BL. Not open for credit to students with credit for course 135. Seismic reflection and refraction, Fou rier and deconvolution, tomography, seismic interferometry. Synthetic seismograms, marine seismics, seismic interpretation, gravity and magnetic fields, inversion uniqueness and depth rules. P/NP or letter grading.

136C. Field Geophysics. (6) Lecture; three hours; discussion; one hour; laboratory; two hours; field work. Requisite: course 135 or 136A. Application of seismic, gravimetric, magnetic, electrical, and other geophysical methods to geologic and engineering problems. Practical aspects of geophysical exploration, including planning, data collection, data reduction, and interpretation. Fieldwork on unsolved problems (week-long field trip). P/NP or letter grading.

137. Petroleum Geology. (4) Lecture; three hours. Requisites: courses 61, 111. Geology applied to exploration for and production of petroleum; techniques of surface and subsurface geology; problems of petroleum geology. P/NP or letter grading.

139. Engineering and Environmental Geology. (4) Lecture; three hours; discussion; one hour. Requisite: course 1 or 100. Recommended: course 111. Principles and practice of soil mechanics and foundation engineering in light of geologic conditions, recognition, prediction, and control or abatement of subsid-
ence, landslides, earthquakes, and other geologic as-
pects of urban planning and subsurface disposal of
liquid and solid wastes. P/N or letter grading.

M140. Introduction to Fluid Dynamics. (4) (Same as
Atmospheric and Oceanic Sciences M120.) Lecture,
three hours; discussion, one hour. Coursequisite: Phys-
ic 131. Fluid statics and thermodynamics. Kinemat-
ic, hydrodynamic and dynamic equations of fluid motion.
Circulation theorems and vorticity dynamics. Rotating

C141. Basin Analysis. (4) Lecture, three hours; labo-
ratory, three hours. Coursequisites: courses 103B, 111.
Mechanisms of basin development, flex-
ural and thermal subsidence, isostasy, subsidence
analysis, quantitative basin modeling, sediment prov-
enience, tectonic settings. Concurrently scheduled
with course C241. P/N or letter grading.

150. Remote Sensing for Earth Sciences. (4) Le-
cure, three hours. Recommended course requisites:
courses 1, 61. Designed for juniors/seniors and graduate
students. Remote sensing related to development of nat-
ural resources. Characteristics of electromagnetic
spectrum and review of remote sensing devices. Ap-
PLICability to land-use classification, soil survey, urban
studies, vegetation classification; emphasis on geo-
logic and geological applications. S/U or letter grading.

152. Physics of Earth. (4) Lecture, three hours; dis-
cussion, one hour. Coursequisites: Mathematics 31A, 31B,
Physics 1A or 1AH. Crust to core tour of Earth and
planets. Isostasy, plate tectonic model of mantle convection and geodynamo as
explored with tools of elasticity, fluid mechanics, and thermo-
dynamics. P/N or letter grading.

153. Oceans and Atmospheres. (4) Lecture, three
hours; discussion, one hour. Coursequisites: Mathematics
31A, 31B, 32A, Physics 1A, 1B, and 1C (or 1AH, 1BH,
and 1CH). Physics and chemistry of Earth's oceans and
atmosphere; origin and evolution of planetary at-
mospheres; climate cycles, radiative forcing, and ocean
system and description of their optical and thermo-
physical properties, with emphasis on simple physics-
based approach. Discussion of current literature. S/U or
letter grading.

200E. Planetary Origins and Evolution. (4) Lecture,
four hours. Designed for graduate students who are
interested in origins of planetary systems and history of
solar system. Open to undergraduate students with consent of instructor. Provides back-
ground needed to understand and/or participate in research related to formation and evolution of solar
system and of other planetary systems. Description of star/planet formation process and subsequent evolu-
tion of planetary systems by integrating observations
and theory. Fosters interdisciplinary knowledge and
communication between Departments of Earth and
Space Sciences and Physics and Astronomy gradu-
ate students and faculty members. S/U or letter grading.

202. Continuum Mechanics. (4) Lecture, three
hours. Kinematics, variational principles and Lagrange equa-
tions, rotational dynamics. Hamilton equations of mo-
tion, linear and nonlinear perturbation theory, applica-
tions to solar system, solid earth, and tectonics. P/N or
letter grading.

203. Numerical Methods for Geosciences. (6) Le-
cure, four hours. Preparation: knowledge of program-
ing language. Coursequisite: Mathematics 105A. Compu-
tational precision and algorithms, linear algebra, non-
linear equations, functional approximation, integra-
tion, ordinary and partial differential equations, spectral and
finite element methods, parallel comput-
ing. Sample programming exercises from Earth and
space sciences. Letter grading.

M204. Time-Series Analysis. (4) (Same as Statistics
M221.) Lecture, three hours. Designed for graduate
students. Exploration of methods for analyzing nu-
merical time-series data. Basic topics in temporal and
frequency analysis, followed by more recent topics.
Examples in various fields including economics, sig-
nal processing, and atmospheric sciences. S/U or let-
ter grading.

205. Inverse Theory and Data Interpretation. (4)
Lecture, three hours. Requirements: Mathematics 115A,
170A, 170B, 171. Inverse modeling problem — deter-
mination of model parameters consistent with experi-
mental data, considering effects of random errors and
nonuniqueness. Emphasis on linear and quasi-linear
problems; nonlinear problems also discussed. Tools
to be used include matrix theory, quadratic forms,
orthogonal rotations, statistics, principal axis transfor-
mation for rectangular matrices, Bachus/Gilbert re-
solving kernels, and Lagrange multipliers. Examples
from broad range of physical sciences. S/U or letter
grading.

C206. Physical Geochemistry. (4) Lecture, three
hours. Course requisite: course 51. Basic principles of physi-
cal chemistry for geologic applications. Thermody-
namics and kinetics of reactions among minerals, nat-
ural waters, and magmas; construction and interpre-

Graduate Courses

200A. Introduction to Geophysics and Space
Physics I: Solid Earth and Planets. (4) Lecture,
four hours. Requirements: Physics 105A, 110A, 112,
131. Geochmistry, cosmochemistry, and petrology;
geotectonics; gravity field; seismology; heat transfer,
thermal and mechanical evolution of mantle; core and
gemagnetism; lunar and planetary interiors. S/U or
letter grading.

200B. Introduction to Geophysics and Space
Physics II: Oceans and Atmospheres. (4) Lecture,
four hours. Requirements: Physics 105A, 110A, 112,
131. Evolution, chemistry, and heat balance of oceans
and atmospheres; molecular spectra, radiative trans-
fer, and planetary observations; dynamics of oceans
and atmospheres. S/U or letter grading.

201A. Introduction to Geophysics and Space
Physics III: Planets — Aeronomy and Interplanetary
Medium. (4) Lecture, three hours. Requirements: Physics
105A, 110B, 112, 131. Solar surface features, heating
and expansion of corona, solar wind, plasma and
magnetic fields, interaction of solar wind with
Earth, magnetospheric phenomena. S/U or letter
grading.

200D. Planetary Surfaces. (4) Lecture, three hours.
Introduction to basic planetary geology and cosmo-
genic and endogenic) shaping solid surfaces in solar
system and description of their optical and thermo-
physical properties, with emphasis on simple physics-
based approach. Discussion of current literature. S/U or
letter grading.

Graduate Courses
ulation of phase diagrams; case studies of important geochemical and environmental issues. Concurrently scheduled with course C106. Additional independent study and presentation required of graduate students. S/U or letter grading.


C210. Geochemical Kinetics: Thermochronometry. (4) Lecture, three hours; discussion, one hour. Designed for graduate physical and biological sciences students. Theoretical and applied aspects of thermochronometry: diffusion of derivation equation and methods of solution, relationship between heat mass diffusion and their simultaneous solution, Boltzmann-Matano analysis, diffusion-controlled closure theory, \(^{40}\text{Ar}/^{39}\text{Ar}\) systematics and interpretive models, multidiffusion domain theory, petrogenic applications. Letter grading.

C211. Mathematical Methods of Geophysics. (4) Lecture, four hours. Enforced requisites: Physics 105A, 110A, 112, 131. Recommended requisites: Physics 132. Designed to provide mathematical background required for students pursuing Ph.D. in Geophysics, as well as related programs in department. Provides extensive survey of these methods, with focus on geophysical applications consistent with needs that geophysicists students encounter in their later careers.

C213. Biological and Environmental Geochemistry. (4) Lecture, three hours. Requisites: Chemistry 14A and 14B (or 20A and 20B), Mathematics 3A, 3B, and 3C (or 31A and 31B). Recommended: at least one lower division Earth and space sciences course. Intended for graduate life and physical sciences students. Study of chemistry of Earth’s surface environment and interplay between biology, human activity, and geology. Introduction to origin and composition of Earth, including atmosphere, crust, and hydrosphere. Examination of how these reservoirs are affected 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.

M216. Evolutionary Biology. (4) (Same as Ecology and Evolutionary Biology M2020A.) Lecture, two hours; discussion, two hours. Current concepts and topics in evolutionary biology, including microevolution, speciation, and the origin of major groups. Analytical biogeography, adaptive radiation, mass extinction, community evolution, molecular evolution, and development of evolutionary thought. S/U or letter grading.

M217. Molecular Evolution. (4) (Same as Ecology and Evolutionary Biology M2020B.) Lecture, two hours. 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 evolution, 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; discussion, one hour. Origin of solar system, tidal dissipation; planetary orbital system; resonance effects and chaos; spin-orbit and orbit-orbit coupling; planetary rings. S/U or letter grading.

220. Principles of Paleobiology. (4) Lecture/discussion, three hours; laboratory, 10 days. Designed for undergraduate biological and physical sciences students with consent of instructor. Current and classic problems in paleobiology, with emphasis on interdisciplinary problems involving aspects of biology, geology, organic geochemistry, and cosmochemistry. Content varies from year to year. May be repeated for credit. S/U or letter grading.

221. Field Geology. (4) Lecture, one hour; discussion, one hour; fieldwork, 10 days. Requisite: course 121 or 184G. Planning, execution, and presentation of geologic mapping projects at professional level. Resolution of problems in Southern California geology from field data. Field area varies from year to year. May be repeated for credit. S/U or letter grading.

222. Introduction to Seismology. (4) Lecture, three hours. Waves of seismic waves; travel-time seismology; epicenter location; amplitude variations; seismograph theory; explosion seismology; seismicity; focal conditions; surface wave analysis; microseisms and tsumuisins. S/U or letter grading.


M225A. Physics and Chemistry of Planetary Interiors I. (4) Lecture, four hours. Chemical compositions of Earth and planets; high and low temperature effects, phase transitions, and equations of state; variations of density and temperature with depth; thermal and convective processes. S/U or letter grading.

M225B. Physics and Chemistry of Planetary Interiors II. (4) Lecture, four hours. Lateral inhomogeneities in Earth: seismic velocities, petrology, geothermal and gravitational variations; evidences of motion; remnant magnetism, tectonics, postglacial rebound; plate tectonics; rheology of mantle; thermal convection. S/U or letter grading.

226. Advanced Igneous Petrology. (4) Lecture, three hours; laboratory, three hours; field trips. Requisite: course 103A. Designed for graduate students. Understanding genesis of igneous rocks based on geochronological, tectonomagmatic, and other geological evidence and principles. Concurrently scheduled with course 226G. Graduate students are required to read more recommended references, make class presentations on particular topics resulting 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 evolution of atmospheres; photochemistry, radiation mechanisms, and transport; atmospheric waves and general circulation; wave-mean flow and turbulence; remote sensing; cloud evolution and structure; dust devils and tornados; and comets. 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-ray, reciprocal lattice theory, single crystal X-ray method; intensification symmetry and elementary crystal structure analysis. S/U or letter grading.

231. Crystal Chemistry and Structure of Minerals. (4) Lecture, three hours; laboratory, three hours. Requisite: course 51. Bonding, interatomic configurations, polymorphic transformations, isomorphism, thermal and positional disorder; survey of structures of common minerals, and relation of physical and chemical properties to crystal structure. S/U or letter grading.


234. Petrologic Phase Equilibria. (4) Lecture, three hours; discussion, three hours. Requisites: course 51, Chemistry 110B. Principles governing homogeneous and heterogeneous equilibria, with selected applications to mineral stability relations in igneous and metamorphic rocks, as well as related processes. S/U or letter grading.

235A-235B. 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 stressing current research in Earth and planetary chemistry. May be repeated for credit. S/U grading.

238. Metamorphic Petrology. (4) Lecture, three hours; laboratory, six hours. Preparation: one introductory Petrology and petrographic course. Interpretation of metamorphic rocks; major models of metamorphism, mantle plumes, subduction zones, Rayleigh depletion model, isotopic fractionation, environmental factors of metamorphism. Laboratory study of representative metamorphic rocks and suites of rocks selected to illustrate topics discussed in lectures. S/U or letter grading.


241. Basin Analysis. (4) Lecture, three hours; laboratory, three hours. Requisites: courses 103B, 111. Metamorphic rock: nomenclature and classification; sedimentary rocks: mechanical and chemical weathering, diagenesis, and regional and thermal subsidence, isostasy, subsidence analysis, quantitative basin modeling, sediment provenance, tectonic settings. Concurrently scheduled with course C141. 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, petrofacies, and paleotectonic reconstructions. 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 on 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), integrating such aspects as crystal structure, chemical equilibria, and petrogenesis. 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 cosmochemistry. S/U or letter grading.

253. Seminar: Petrology. (4) Seminar, three hours. Problems of igneous or metamorphic petrology: methods for evaluating physical conditions of metamorphism; diffusion in mineralogic systems; origin of ultramafic 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 lutites; 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; microporosity, sediment deformation, and earthquake preparation; basin analysis. S/U or letter grading.

256. Field Seminar. (2 to 6) Seminar, three hours; discussion, one hour; fieldwork, five to 20 days. Requisites: courses 244 and 248. 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. Concurrency scheduled with course C160. S/U or letter grading.

261. Topics in Magnetospheric Plasma Physics. (4) Lecture, four hours. Lectures, discussions, and exercises on specific advanced topics in magnetospheric plasma physics. Previous courses examined magnetic storms, magnetospheric substorms, ultralow frequency waves, and adiabatic particle motion in Earth's radiation belts. S/U or letter grading.


265. Instrumentation, Data Processing, and Data Analysis in Space Physics. (4) Lecture, three hours. Principles and survey of techniques of magnetometers and other instruments. Data processing, display, and archiving. Time-series analysis techniques, including filtering. Fourier series, eigenanalysis, and power spectra. 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, including earthquake phenomena, remote sensing, and hydrology. Extensions to critical phenomena in engineering and socioeconomic systems. Letter grading.


289. Seminar: Fluid Dynamics. (2) Seminar, one to two hours. Problems of current interest in fluid dynamics, with emphasis on geophysical applications. May be repeated for credit. S/U grading.


293A-293B-293C. Space Physics Journal Club. (1-1-1) Seminar, one hour. Limited to graduate students in Earth and Space Sciences, Atmospheric and Oceanic Sciences, and Physics and Astronomy Departments. 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. Witten reports required. May be repeated for credit. S/U grading.

C296A-C296Z. Research Topics in Earth and Space Sciences. (1 each) Research group meeting, one 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 and literature in research specialty of faculty member teaching course. May be repeated for credit. Concurrency scheduled with courses C194A-C194Z. S/U grading.

C296A. Rock Deformation, Structural Geology, Tectonics.
C296AA. Mineral Physics.
C296B. Volcanology and Geochemistry of Volcanic Rocks.
C296C. Seismology and Solid 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.
C296W. Earthquakes and Earth Structure.
C296X. Structural Geology, Tectonics.
C296Y. Advanced Techniques in Geological Research. (2 to 4) Lecture, two to four hours. S/U grading.

C297. Advanced Topics in Earth and Space Sciences. (2 to 4) Lecture, two to four hours. S/U or letter grading.

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**Scope and Objectives**

The Master of Arts degree in East Asian Studies provides an interdisciplinary and highly flexible program of study. With opportunities to take a range of advanced courses in the social sciences and humanities, students are able to tailor their programs to emphasize particular methodological and disciplinary approaches and to focus in depth on the region as a whole and on its dynamics in particular countries. Coursework and language offerings range from the ancient to the contemporary and allow students to prepare for a broad range of individual needs and career interests with a thorough grounding in the history and culture of the region.

Information on the undergraduate major in Asian Studies can be found in the International and Area Studies section later in this catalog.

**Graduate Study**

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website, http://grad.ucla.edu/gasaa/index.php?pg=mgmrnintro.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**

**Graduate Courses**

291A-291B, (4-4) Seminar, three hours. Selected topics on East Asia. May be repeated for credit with topic change. S/U or letter grading.

**ECOLOGY AND EVOLUTIONARY BIOLOGY**

**College of Letters and Science**

UCLA

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Daniel T. Blumstein, Ph.D., Chair

**Professors**

Priyanga A. Amarasekare, Ph.D.

Paul H. Barber, Ph.D.

Daniel T. Blumstein, Ph.D.

Donald G. Buth, Ph.D.

Peggy M. Fong, Ph.D.

Malcolm S. Gordon, Ph.D.

Patricia A. Gowaty, 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.

Barret A. Schlinger, Ph.D.

H. Bradley Shaffer, 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. Collias, Ph.D.

Franz Engelmann, Ph.D.

Arthur C. Gibson, Ph.D.

Elma González, Ph.D.

William M. Hamner, Ph.D.

Henry A. Hespenheide, Ph.D.

J. Lee Kavanan, 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 P. Vaught, Ph.D.

Eduardo Zeiger, Ph.D.

**Associate Professors**

Michael E. Alfaro, Ph.D.

James O. Lloyd-Smith, Ph.D. (De Logi Professor of Biological Sciences)

**Assistant Professor**

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.

Debra M. Shier, 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 and to the population and community dynamics of multiple species. All of these subject areas address practical problems facing the world today, and all influence human decisions on matters ranging from conservation of the environment to advancement of medical science.

The Bachelor of Science degrees combine essential background studies in mathematics, chemistry, and physics with a general introduction to all of the biological subjects, as well as advanced in-depth exposure to some of them. The Master of Science and Ph.D. degrees provide opportunities for advanced, concentrated study. The Master of Science degree requires, in addition to specified coursework, completion of either a comprehensive examination or the performance of original research culminating in a thesis. The 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.

Biology B.S.

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/admissionTransferGuide.htm](http://www.admissions.ucla.edu/prospect/admissionTransferGuide.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 100L (if completed Fall Quarter 2011 and thereafter), 101, 103, 105, 109/109L (count as one course), 110, 111, 112, 113A, 114A, 115, 117, 128, 136, 152/152L (count as one course), 162/162L (count as one course), 170, 181. Four units from the Field Biology Quarter or Marine Biology Quarter may be applied, and one course from Molecular, Cell, and Developmental Biology C150/150AL or Physiological Science 166 may be included (students with credit for Ecology and Evolutionary Biology 170 cannot also take Physiological Science 166)
4. At least 8 units (two courses) from Ecology and Evolutionary Biology 100, 101, 103, 105, 107, 109, 110, 111, 112, 113A, 114A, 115, 116, 117, C119A, 120, 121, 122, 126, M127, 128, 129, 130, M131, 133, 135, 136, 137, M139, 142, M145, 151A, 152, 153, 154, 155, 160, 162, 170, M171, C174, 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. Eight units from the Field Biology Quarter or Marine Biology Quarter may be included, and any departmental course not applied under item 2 or 3 above may be applied in this category
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, Biometrics 110 and/or Biostatistics 100B, chemistry (except Chemistry and Biochemistry 193A through 199; Chemistry and Biochemistry 153L is 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 Biology and Evolutionary Biology series or 4 units of Ecology and Evolutionary Biology 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, 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 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 general calculus, one year of general microbiology, 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 101, 103, 105, 110, 111, 112, 113A, 114A, 115, 117, or 130.

2. At least 4 physiology units (one course) from Ecology and Evolutionary Biology 137, 162/162L (must take both), 170, or Physiological Science 166 (students with credit for Ecology and Evolutionary Biology 170 cannot also take Physiological Science 166).


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), Environmental Science 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), Molecular, Cell, and Developmental Biology 172, 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; 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 (students with credit for Ecology and Evolutionary Biology 170 cannot also take Physiological Science 166).


5. At least 4 evolution units (one course) from Ecology and Evolutionary Biology 116, 120, 121, 130, 133, 135, M171, C174, or 175.

6. One capstone field quarter consisting of 16 units from the Marine Biology Quarter.
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 M131, M133, 198B, 199, Environment 184, Geography 100, 101, 103, M106, M117, 123, 130, 169, Mechanical and Aerospace Engineering 103, or 150A, Molecular, Cell, and Developmental Biology 172

Credit for 199 courses from other departments may not be applied.

Each course applied toward requirements for preparation for the major and the major must be taken for a letter grade. Marine Biology majors must maintain a 3.0 overall grade-point average and have taken Statistics 13 or equivalent.

As requisites for the Marine Biology Quarter, students must have a 3.0 overall grade-point average and have taken Statistics 13 or equivalent. Preference for the Marine Biology Quarter is given to Ecology, Behavior, and Evolution and Marine Biology majors. Students must complete Ecology and Evolutionary Biology 109 and 109L prior to participating in the Marine Biology Quarter. 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, 124A, 124B, 125, 126, 132, 134B, and 151B. The Marine Biology Quarter includes some combination of Ecology and Evolutionary Biology 102, 106, 123A, 123B, 147, 148, 163, 164, 165, and 182. 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 ecosystem processes. The minor seeks to provide students with a greater depth of experience and understanding of the role that science can play in developing conservation policy.

To enter the minor, students must (1) be in good academic standing (2.0 grade-point average or better), (2) have completed Life Sciences 1, Ecology and Evolutionary Biology 100, and 116 (or Environment 121) with minimum grades of C or better, and (3) file a petition in the Undergraduate Advising Office, 101 Hershey 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.

Non-life sciences majors wishing to minor in Conservation Biology should be aware that preparation courses in chemistry, life sciences, mathematics, and physics are requisites to some of the upper division courses accepted for the minor.


Required Research Project or Internship (4 units minimum): Ecology and Evolutionary Biology 195 or 199 or a suitable research internship from another department.

Participation in the Annual Biology Research Symposium (Poster Session) sponsored by the department in Spring Quarter is highly recommended.
A minimum of 20 units applied toward the minor requirements must be in addition to units ap-plied toward major requirements or another minor, and at least 20 units applied toward the minor must be taken in residence at UCLA. Transfer credit for any of the above is subject to departmental approval; consult the undergradu-ate 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 de-tailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website, http://grad.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 Department of Ecology and Evolutionary Biology offers Master of Science (M.S.), Candi-date in Philosophy (C.Phil.), and Doctor of Phi-losophy (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, dis-tribution, 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 Com-munities. (5) Discussion, four hours. Limited to 30 students. Introduces students to biomedical research as it affects minority communities, with emphasis on methodology, design, conse-quences, and ethics of current research. Discussion leaders provide information on preparation and train-ing for research careers. P/NP or letter grading.

12. Diversification and Extinction: Crisis and Conser-vation. (5) 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 class. P/NP or letter grading.


15. Why Ecology Matters: Science Behind Environ-mental Issues. (5) Lecture, three hours; discussion, two hours. Basic ecological concepts, scientific method, and ecological basis for local and global en-vironmental concerns. Changes to be faced in this century, including need to find interdisciplinary and collaborative solutions to world’s worsening envi-ronmental problems (e.g., global climate change, bio-diversity loss, deforestation, pollution, and decline of water resources, declining fisheries). Environmental literacy to equip students to become leaders in growing green economy and to help forge solutions to current and future environmental problems that threaten natural re-source base. P/NP or letter grading.

16. Field Biology. (4) Lecture, three hours; discus-sion, two hours, or field trips, three to four hours. Rec-ommended preparation: Life Sciences 15. Not open to credit to students with credit for course 122 or Life Sciences 1. Introduction to natural history of Western North America, especially Southern California. Classi-fication, distribution, and ecology of common plants and animals. P/NP or letter grading.

17. Desert Life. (4) Lecture, three hours; laboratory, two hours. Introduction to fundamental structural, physiological, and behavioral features of desert or-ganisms, with special emphasis on deserts of West ern North America. P/NP or letter grading.

20. Marine Biology. (5) Lecture, three hours; dis-cussion, two hours; field trips, two hours. Not open for credit to students with credit for Earth and Space Scien ces 15. Examination of marine processes that take place in oceans, with emphasis on their effects on or-ganisms. P/NP or letter grading.

21. Field Marine Biology. (5) Lecture, three hours; discussion, one hour; field trips, six hours. Examination of marine species, comparative development and de-sign in light of ongoing research. Letter grading.

22. Marine Ecology. (5) Lecture, three hours; discus-sion, two hours. Basic ecological concepts, scientific method, and ecological basis for local and global en-vironmental concerns. Changes to be faced in this century, including need to find interdisciplinary and collaborative solutions to world’s worsening envi-ronmental problems (e.g., global climate change, bio-diversity loss, deforestation, pollution, and decline of water resources, declining fisheries). Environmental literacy to equip students to become leaders in growing green economy and to help forge solutions to current and future environmental problems that threaten natural re-source base. P/NP or letter grading.

23. Experimental Marine Invertebrate Biology. (4) Lecture, three hours; laboratory, three hours; na turalexams, one hour. Development of tools for research, integrating research and presenting complex scientific concepts concisely and effectively. Basic animation techniques and work in groups to illustrate life sciences concepts. How to present results in science. BPR grading.


25. Living Ocean. (8) Lecture, three hours; discussion, two hours; laboratory, two hours. Examination of marine processes that take place in oceans, with emphasis on their effects on organs-isms. P/NP or letter grading.

26. Biodiversity and Extinction: Crisis and Conser-vation. (5) Discussion, four hours. Limited to 30 students. Introduces students to biomedical research as it affects minority communities, with emphasis on methodology, design, conse-quences, and ethics of current research. Discussion leaders provide information on preparation and train-ing for research careers. P/NP or letter grading.

27. Variable Topics in Ecology and Evolutionary Bi-ology. (5) Seminar, three to six hours. Designed 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 regu-lations of populations, organization of communities and ecosystems, biogeography, and behaviors ani-mals use to find food, choose mates, and interact in social groups. Letter 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 research methods in ecology and behavior, including independent research projects and to gain understanding of scientific method, criti-cal evaluation of research papers, and development of scientific writing skills. Involves work outside and off-campus meetings. Letter grading.

101. Marine Botany. (6) Lecture, four hours; labora-tory, six hours; three to four field trips. Requisite: Life Sciences 1. Introduction to biology and ecology of marine plants, including algae, sea grasses, and man-groves, with focus on form and function of marine plants and their ecological role in different marine habitats and ecosystems. Letter grading.


103. Plant Evolution and Systematics. (5) Lecture, three hours; laboratory, three hours; field trip. Requi sites: Life Sciences 1. Evolution, systematics, mor-phology, principles of taxonomy, phytogeography, phylogenetic analysis, speciation, and natural history of plants. Letter grading.


106. Experimental Marine Invertebrate Biology. (4 or 5) Lecture, two hours; laboratory, 12 hours. Requi-sites: course 105. Physiological Science 168 (may be taken concurrently). Offered either as 4-unit quarter-long course or as 4-unit Marine Biology Quarter course. Advanced course of natural history, physiolo-gy, biochemistry, invertebrates, with emphasis on independent laboratory and field investigations. P/NP or letter grading.

107. Evolution, Development, and Function of In vertebrate Animals. (6) Lecture, three hours; labora-tory, three hours; three week-end field trips. Requisite: course 105 or completion of Marine Biology Quarter. Advanced invertebrate biology course exploring evo-lutionary relationship of animal groups and evolution of marine species, comparative development and de-velopmental genetics of invertebrate form, and form and function as they relate to marine invertebrates. Letter grading.

109. Introduction to Marine Science. (4) Lecture, three hours; discussion, one hour. Requisite: Life Sci ences 1. Strongly recommended for prospective Ma-rine Biology Quarter students. Introduction to physical and sociocultural world of 70 percent of planet. Designed to be integrative, with focus on geological evolution of seas, physical and chemical properties of
water, and how these abiotic processes shape ecology and evolution of marine organisms and environments. Laboratory Field course for seniors. Twenty-unit course. Offered during Marine Quarter.

109L. Introduction to Marine Science Laboratory. (2) Laboratory, three hours. Enforced requisites: course 109 (may be taken concurrently), Life Sciences 1. Introduction to marine environments and methods used to study them. Emphasis on construction 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, 23L. Study of vertebrate morphology, function, and evolution from viewpoint of comparative anatomy. Focus on functions, development, and paleontology. Laboratory study of selected vertebrates. Letter grading.

111. Biology of Vertebrates. (6) 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 prerequisites: Biology 119; Biology of freshwa- ter and marine fishes, with emphasis on their evolution, systematics, morphology, zoogeography, and ecology. Field trips to examine fishes of Southern California saline, tidelands, 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 biology of reptiles and amphibians of world, covering current systematics, ecology, behavior, morphology, and physiology of these animals. Letter grading.

113B. Field Herpetology. (6) Lecture, three hours; laboratory, two weeks. Requisites: courses 100, 111. Two weeks of off-campus research projects followed by two-week lecture course and offered only as part of Field Biology Quarter. Biology, particularly ecology and behavior, of reptiles and amphibians in their natural habitat. Students carry out supervised research projects, then write up and orally present their results in seminar fashion. Letter grading.


114B. Field Ornithology. (8) Requisite: 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. Particular emphasis on ecology and behavior of birds in their natural habitat. Letter grading.


116. Conservation Biology. (4) Lecture, three hours; discussion, two hours. Requisite: Life Sciences 1. Recommended: course 100. Not open to credit to students with credit for Environ 121. Study of ecological and evolutionary principles as they apply to preservation of genetic, species, and ecosystem diversity. Discussion topics 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. Requisite: course 100. 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. Requisite: course 100. Five-week course offered only as part of Field Biology Quarter. Field-oriented introduction to mechanisms by which vascular plants adapt themselves to their abiotic and biotic environments using community, population, and ecophysiological levels of integration. Letter grading.

C119A. Mathematical and Computational Modeling in Ecology. (4) (Formerly numbered C119.) Lecture, two hours; discussion, two hours. Requisite: Mathematics 3B or 31A. Recommended: courses 100, 122. Life Sciences 1, Mathematics 3C. Introduction to mathematical models, stochastic models, fitting models to data, sensitivity analysis, presentation of model results, and other topics from current literature. Concurrently scheduled with course C219A. P/NP or letter grading.

C119B. Modeling in Ecological Research. (4) Lecture, two hours; discussion, two hours. Requisite: course C119A. Advanced techniques in mathematical and computational modeling of ecological dynamics and other population dynamic problems. Independent research projects developed by students. Topics include model formulation, stochastic models, fitting data to models, sensitivity analysis, presentation of model results, and other topics from current literature. Concurrently scheduled with course C219B. P/NP or letter grading.

120. Evolution. (4) Lecture, three hours; discussion, two hours. Requisites: Life Sciences 1, 2, 3, 4, 23L, Mathematics 3A and 3B, or 31A. Designed for departmental majors specializing in environmental and population biology. Introduction to theory and methods of processes of evolution, with emphasis on natural selection, population genetics, speciation, evolutionary rates, and patterns of adaptation. P/NP or letter grading.

121. Molecular Evolution. (4) Lecture, three hours; discussion, one hour. Requisites: Life Sciences 3, 4, 23L. Molecular biology, with emphasis on evolutionary aspects. DNA replication, RNA transcription, protein synthesis, gene expression, and molecular evolution. Letter grading.

122. Ecology. (4) Lecture, three hours; discussion, two hours. Requisites: 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 the role of biological processes and environmental history; population and community processes, behavior, physiological, and ecological mechanisms. Letter grading.

123A–123B. Field Biology. (4 or 8 each) Formerly numbered 123B. Lecture, five hours; laboratory, 15 hours. Requisite: course 100. Summer intensive course given off campus as part of Marine Biology Quarter that is in residence at research station located outside continental U.S. 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.

124A–124B. Field Ecology. (4 or 8 each) Formerly numbered 124. Lecture, five hours; laboratory or field trip, 15 hours. Requisite: course 100, Life Sciences 1. Recommended: courses 111, 120, 122. Offered as part of Field Biology Quarter that is in residence at research station located outside continental U.S. for part of or for duration of term. Field and laboratory research in ecology; collection, analysis, and write-up of numerical data, with emphasis on design and execution of field experiments. Letter grading.

125. Tropical Animal Communication. (4 or 8) Requisites: course 100, Life Sciences 1. Offered either as 4-unit-longer course or as 8-unit Field Biology Quarter course. Four-unit course has lecture, three hours; discussion, experimental communication behavior, tropical vertebrate biology, and evolution of information processing systems. Eight-unit course covers same basic lecture material in five or six intensive weeks, followed by extended field trips where students do individual projects in behavioral ecology. Letter grading.

126. Behavioral Ecology. (4 or 8) Requisites: course 100, Life Sciences 1, Mathematics 3C or 32A. Recommended: course 128. Offered either as 4-unit quarter-long course or as 8-unit Field Biology Quarter course. Four-unit course has lecture, three hours; discussion, three hours. Animal communication behavior, island biogeography, and evolution of social behav- ior. Eight-unit course, 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 Environment M127 and Geography M127.) Lecture, three hours; discussion, one hour; field trips. General treatment of soils and environmental implications: soil development, morphology, and worldwide distribution of soil orders; physical, chemical, hydrologic, and biologic- al 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. (6) Lecture, three hours; laboratory, two-day field trip. Requisites: Life Sciences 1, Physics 1C and 4BL, or 6C or 6CH. Study of plant/environment interactions under natural conditions. Transpiration and photosynthesis, leaf temperature, water stress, and other physiological processes in soil/plant/atmosphere continuum. Letter grading.

129. Animal Behavior. (4) Lecture, three hours; discussion, two hours. Requisites: course 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.


M131. Ecosystem Ecology. (4) (Same as Geogra- phy M117.) Lecture, three hours; field trips. Requisite: Geography 2 or Life Sciences 1. Designed for juniors/ seniors. Development of principles of ecosystem ecology, with focus on understanding links between ecosystem structure and function on an energy and water balances, nutrient cycling, plant-soil-microbe interactions, landscape heterogeneity, and human disturbance to ecosystems. P/NP or letter grading.

132. Field Behavioral Ecology. (8) Lecture, two hours; laboratory/field trip, 10 hours. Requisites: course 100, Life Sciences 1. Recommended: course 129. Five-week course offered only as part of Field Bi- ology Quarter. Field research in behavioral ecology, emphasizing animal communication. Design and execu- tion of individual and small group field projects during extended field trip. Letter grading.

133. Elements of Theoretical and Computational Biolog- ical Theory. Lecture, three hours; discussion, one hour; laboratory, two hours. Requisites: Life Sciences 1, 2, 3, 4, 23L, Mathematics 3A, 3B, or 3C. Strongly recommended: elementary statistics course. Introduction of basic core mathematical ideas and models necessary to understand contemporary ecology and evolutionary biology. Population ecology and growth, community ecology, population genetics, and evolution as explored. Letter grading.

134B. Field Physiological Ecology of Desert Ani- mals. (8) Field course. Requisite: Life Sciences 1. Recommended: course 100. Two weeks of off-campus study in desert, two-week course (four hours per day) and offered only as part of Field Biology Quarter. Consideration of physiological, be- havioral, morphological, and ecological mechanisms desert animals use to enhance their survival in arid
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habitats. Students carry out supervised research projects, then write up and orally present their results in seminar format.


136. Ecology, Behavior, and Evolution Laboratory. (8) Lecture; four hours; laboratory, eight field trips, six and one half days per term. Required: Life Sciences 1, Mathematics 3C or 32A. Strongly recommended: course 115, 125A, 125B. Designed for Ecology, Behavior, and Evolution majors. Laboratory and field exercises on population genetics, growth, and regulation; competition and predation; 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 grades.

137. Chemical Communication. (4) Lecture; three hours; discussion, one hour. Required: Chemistry 14A, 14B, 14BL, 14C, 14CL, and 14D, or 20A, 20B, 20L, 30A, 30AL, and 30BL, Life Sciences 1, 2, 3, 23L. Chemical signals are most important means by which organisms communicate. Exploration of how chemical signals are produced, transported, and influence behavior of microbes, plants, and animals. Synthetic approach, with emphasis on applications to cell biology, physiology, and ecology. P/NP or letter grading.

M139. Introduction to Chemical Oceanography. (4) (Same as Ocean Science M105.) Lecture; three hours; discussion, one hour. Introduction to physical processes of marine environment, chemical nature of oceans and natural processes governing this composition in past and present. Cycles of major and minor oceanic constituents, with focus on those that are most important for life (i.e., carbon, nitrogen, phosphorus, silicon, and oxygen). Investigation of primary production, export production, remineralization, diagenesis, air-sea gas exchange processes. Letter grading.


M145. Advanced Paleontology. (4) (Same as Earth and Space Sciences M118.) Lecture; three hours. Required: course 110 or 125A. Introduction to the fossil record, bearing on these theories. Consideration of diagenesis, diagenesis, and geological processes governing this composition in past and present. Cycles of major and minor oceanic constituents, with focus on those that are most important for life (i.e., carbon, nitrogen, phosphorus, silicon, and oxygen). Investigation of primary production, export production, remineralization, diagenesis, air-sea gas exchange processes. Letter grading.

147. Biological Oceanography (4) Five-week intensive course. Lecture; five hours; laboratory, 15 hours. Required: Chemistry 14A, 14B, and 14BL, or 20A, 20B, 20L, 30A, 30AL, and 30BL, Life Sciences 1, 2, 3, 23L. Lecture includes physical, chemical, and biological processes affecting 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.


151A. Tropical Ecology. (4) Lecture; one hour; discussion, two hours. Required: Life Sciences 1. Broad introduction to biodiversity, community structure, and dynamics of tropical communities in forest habitats. Discussion of such themes as biogeography, forest structure, plant growth forms, animal communities, herbivory, forest dynamics, and disturbance to gain understanding and appreciation of plant function, including dynamic processes of growth, development, and reproduction. Exercises provide training in approaches and instrumentation such that students become prepared to apply physiological techniques to answer questions on plant function. Letter grading.

152. World Vegetation Ecology and Ecophysiology. (4) Lecture, three 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 scale-free 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. Required: Chemistry 14A, 14B, and 14BL (or 20A, 20B, 20L, 30A, 30AL, 30BL), Life Sciences 2, 3, 4, Physics 6A. Chemical and physical principles pertinent to understanding functional responses of organisms to environment challenges, including those due to anthropogenic causes. Integrative focus providing comprehensive training in basic sciences of environmental processes, organismal acclimation and adaption, and consequences of individual and collective adaptation to environments. Select applied topics include challenges associated with global warming, ocean acidification, low oxygen availability and dead zones, and changes in mass transport due to unprecedented variation in air and water motions. P/NP or letter grading.

154. California Ecosystems. (5) Lecture; three hours; laboratory or field trip, four hours. Required: Life Sciences 1. Recommended; course 100. Introduction to structure and dynamics of California ecosystems, with focus on Southern California, and impact of human activities on these systems. P/NP or letter grading.

155. Community Ecology. (4) Lecture; three hours; discussion, one hour. Enforced requisite: Life Sciences 1. Recommended; course 100 or 122. Community ecology is study of biodiversity in ecological context: structure and dynamics of natural species assemblages in space and time, and ecological and evolutionary mechanisms that determine which species are present or absent from particular assemblages. Examination of existing theories of community organization and evidence, both observational and experimental, bearing on these theories. Consideration of di verse array of communities — plant, animal, microbial — and of concept of evolution of extraordinary natural history and diversity of life on Earth as it exists in its living ecological context. Discussion of how ecological communities are responding now and will respond in future to anticipated global change, and conservation implications of these changes. Letter grading.

160. Introduction to Plant Biology. (4) Lecture; three hours; discussion, one hour. Not open for credit to students with credit for course 162. Introduction to general biology of land plants, including photosynthesis. Carbon and nitrogen metabolism and its regulation; organellar interactions and compartmentation. Water relations, ion transport, flowering, hormone action, and plant responses to stress. Letter grading.

162L. Plant Physiology and Ecophysiology Laboratory. (2) Laboratory, four hours. Enforced requisite: Life Sciences 1, 2, 3, 23L. Recommended; course 152 or 162. Focus on whole-plant physiology and ecophysiology from biochemical and molecular processes to whole-plant function and field performance to gain understanding and appreciation of plant function, including dynamic processes of growth, development, and reproduction. Exercises provide training in approaches and instrumentation such that students become prepared to apply physiological techniques to answer questions on plant function. Letter grading.


165. Ecological Physiology of Marine Vertebrates. (4) Lecture; five hours; laboratory, 15 hours. Required: Chemistry 14B and 14BL, or 20B and 30AL, Life Sciences 1, 3, 23L. Required: 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; three hours; laboratory, six hours. Required: Chemistry 14D, or 30B and 30BL, Life Sciences 1, 2, 3, 4, 23L. Mathematics 5C, Chemistry 32A, or 32B, Physics 1C and 4BL, or 6C or 6CH. Not open for credit to students with credit for Physiological Science 166. Designed for Ecology, Behavior, and Evolution majors. Introduction to physiological (function) of animals' organs and organ systems, with emphasis on environmental interactions and ecological adaptations. Letter grading.


C174. Comparative Biology and Macroevolution. (4) Lecture; three hours; laboratory, three hours. Required: Life Sciences 1. Recommended: one introductory statistics course. Modern comparative biology provides theoretical framework for understanding evolutionary processes. How does body shape evolve? What are dynamics of evolutionary arms race? Why are there so many species in tropics? Why are there so many beetles and so few crocodiles? Did dinosaurs put brakes on diversification of mammals? Examination of why tree of life is essential to understanding patterns of biological diversity and how phylogenetic
comparative methods are used to test macroevolu-
tionary hypotheses. Concurrently scheduled with course 25, Atmospheric and Ocean-
ic Sciences M10, Chemistry 2, 14A, 20A, Earth and Space Sciences 1, 1F, 15, Environment M10, or Life Sciences 1. Designed for juniors/seniors. Combined instruction in the design and teaching of learning pedagogy, with six weeks of supervised teaching experience at Santa Monica Pier Aquarium. Students practice communicating scientific knowledge and develop skills on how to construct representations to develop ocean science literacy at all levels and to encourage broad public understanding of science and environmental stewardship. Need for young researchers to own how of communicate their science to audiences is especially critical when considering that Americans are expected to comprehend and respond to increasingly complex issues, such as global climate change, with limited understanding of how natural world works. Concurrently scheduled with course C237. Letter grading.

180A-180B, Seminars: Biology and Society. (2-4) Seminar. Three hours (course 180B), Investigations and discussions of current socially important issues involving substantial biological considerations, either or both as background or research. Topics may include global climate change, with limited understanding of how natural world works. May be repeated for credit. Letter grading.


185. Evolutionary Medicine. (4) Lecture, two and one half hours; discussion, one hour. Enforced requisite: Life Sciences 1. Designed for departmental majors specializing in environmental and population biology and in medicine. Introduction to mechanics and processes of evolution, with emphasis on natural selection, population genetics, speciation, evolutionary rates, and patterns of adaptation. Coverage of fundamental principles of evolution, with special focus on medicine and human health. P/NP or letter grading.

186. Evolutionary Medicine: Clinical Perspective on Medical, Surgical, and Psychiatric Disorders. (4) Lecture, three hours; discussion, one hour. From breast cancer and heart failure to self-injury, obsessive-compulsive and eating disorders, all contemporary medical issues have evolutionary roots. Understanding of application of evolutionary thought to issues that concern physicians, veterinarians, psychologists, and other healthcare providers. Development of awareness and understanding of evolutionary roots of these disorders provides future healthcare providers with expanded perspective that enhances the care that members of the medical profession extend to patients in whatever field they enter. Letter grading.

187. Variable Topics in Ecology and Evolutionary Biology. (4) Lecture, three hours; discussion, one hour. Requisites: Life Sciences 1, 2, 3, 4, 23L. Investigating, discussion, study of current important issues involving substantial biological considerations in ecology and evolutionary biology. Contact Undergraduate Advising Office for current topics. May be repeated for credit. P/NP or letter grading.

188. Special Courses in Ecology and Evolutionary Biology. (2) Seminar, two hours. Departmentally sponsored experimental or temporary courses, such as those taught by visiting faculty members. May be repeated for credit. P/NP or letter grading.

190. Research Colloquia in Ecology and Evolutionary Biology. (1) Seminar, one hour. Designed to bring together students undertaking supervised research in ecology and evolutionary biology. Consult Schedule of Courses for topics and instructors. May be repeated for credit. P/NP or letter grading.


192A-192B. Undergraduate Assistant in Ecology and Evolutionary Biology. (4-2) Seminar, 12 hours (course 192A) and six hours (course 192B). Limited to juniors/seniors. Training and supervised practicum for advanced undergraduate students in assisting with courses related to biology. Students assist in preparation of materials and development of innovative programs with guidance of faculty members in small course settings. Consult Undergraduate Advising Office for further information. May not be applied toward course requirements for departmental majors. May be repeated for credit. P/NP grading.


194A. Research Group or Internship Seminars: Access to Research Careers. (2) Seminar, six hours. Designated for research traineeships or those who have strong commitment to pursue graduate studies in molecular, biochemical, physiological, or biomedical fields. Weekly presentation and discussion of paper selected from current literature. No more than 4 units may be applied toward departmental majors. May be repeated for credit. Letter grading.

194B. Research Group or Internship Seminars: Ecology and Evolutionary Biology. (1) Seminar, two hours. Corequisite: one course from 198A through 198D or 199. Designed to encourage participation and stimulate progress in specific research areas for undergraduate students who are part of departmental research group or internship. Discussion of use of specific research methods and current literature in field or of research of faculty members or students. May be repeated for credit. P/NP grading.

195. Community or Corporate Internships in Ecology and Evolutionary Biology. (4) Tutorial, 12 hours. Internship course for juniors/seniors to be supervised by Center for Community Learning, fieldwork site, and faculty adviser. Consult Undergraduate Advising Office for more information. Students meet on regular basis with instructor and provide periodic reports of their experience. May not be applied toward require-ments for departmental majors. May be repeated twice for credit. Individual contract with supervising faculty member. P/NP grading.

196. Research Apprenticeship in Ecology and Evolutionary Biology. (2 to 4) Tutorial, three hours per week per unit. Limited to juniors/seniors. Entry-level research apprenticeship for upper division students under guidance of faculty members to be repeated for credit. Individual contract required. P/NP grading.

198A-198D, Honors Research in Ecology and Evolutionary Biology. (4 each) Tutorial, 12 hours. Limited to juniors/seniors. Supervised individual research designed to broaden and deepen students’ knowledge of some phase of biology. Must be taken with Ecology and Evolutionary Biology Department faculty for at least two terms and for total of at least 8 units. Eight units may be applied toward departmental majors. Individual contract required. In Progress (198A) and letter (198B) grading. Students may elect to enroll in additional research through courses 198C and 198D (letter grading). Report on progress must be presented to undergraduate adviser each term 198 course is taken.

199. Directed Research in Ecology and Evolutionary Biology. (2 to 4) Tutorial, six to 12 hours. Preparation for summer or fall independent study or research to be undertaken. Studies to involve laboratory or field-related research, not literature surveys or library research. Proposal to be developed in consultation with instructor. Approval to undertake study or research and signed by student and instructor must be presented to undergraduate adviser. Only one 199 course may be applied toward departmental majors. May be repeated for credit. Individual contract required. Letter grading.

Graduate Courses

M200A. Evolutionary Biology. (4) Same as Earth and Space Sciences M216. Lecture, two hours; discussion, two hours. Current concepts and topics in evolutionary biology, including microevolution, speciation and species concepts, analytical biogeography, adaptive radiation, mass extinction, community evolution, molecular evolution, and development of evolutionary thought. S/U or letter grading.

200B. Ecology. (4) Lecture, two hours; discussion, two hours. Principles and current topics in ecology. Topics may include island biogeography; disturbance ecology, chemical ecology, and physiological ecology. S/U or letter grading.

200C. 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.

203. Marine Botany and Physiology. (4) Lecture, two hours; discussion, one hour; laboratory, six hours. Experimental project. Designed for graduate students. Structure, reproduction, life histories, and biology of marine algae, with emphasis on physiological ecology and biochemistry. Techniques in physiology, ecology, and biochemical investigation of algae. Given off campus at marine science center. S/U or letter grading.

204. Advanced Biology of Algae. (4) Lecture, four hours; discussion, one hour. Consideration of current research in experimental phyology. Topics include discussion of appropriate aspects of chemical and physiological biogeography, physiological ecology, and algae processes in ocean and freshwater habitats. S/U or letter grading.

205. Marine Invertebrate Biology. (4) Lecture, four hours; laboratory, eight hours. Functional morphology, life histories, and systematics of marine invertebrates.
of all major and most minor taxa; emphasis on living animal and its habitat. Given off campus at marine science center. S/U or letter grading.

206. Advanced Ichthyology. (4) Lecture; three hours; laboratory; three hours. Requisite: course 111 or 112. Advanced study of various aspects of fish biology. Theme varies from year to year. May be repeated for credit. S/U or letter grading.

208. Advanced Vertebrate Morphology. (4) Lecture; two hours; laboratory; eight hours. Requisite: course 110. 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. May be repeated once for credit. S/U or letter grading.

209. 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.

210. Advanced Ornithology. (4) Lecture; two hours; laboratory; two hours; fieldwork; two hours. Requisite: course 111 or 112. Advanced topics in modern avian biology. Emphasis on experimental approaches to investigations of physiology (energetics, nutrition, osmoregulation), ecology (population and community organization), and behavior (flying, breeding, social activity). S/U or letter grading.

216. Statistical Methods for Life Sciences. (4) (Same as Statistics M251.) Lecture; three hours. Requisite: Statistics M15, M215. Fundamentals of statistics as applied in life sciences, including statistical inference for continuous and categorical data (estimation, testing of means and proportions, ANOVA) study design, linear regression, and introduction to principle components analysis. May be implemented on computer with SAS. S/U or letter grading.

217. 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.

218. Oceanography. (4) Lecture; four hours; discussion; one hour. Designed for graduate students. Ecology and dynamics of pelagic and benthic associations; physicochemical properties of seawater and marine substrates. Theme varies from year to year. May be repeated for credit. S/U or letter grading.


M226. Global Health Measures for Biological Emergencies. (4) (Same as Epidemiology M226.) Lecture; four hours; discussion; one hour. Requisite: Epidemiology M220. Mitigation and control of public health programs and public health graduate education. Because of seriousness of such threats, it is important that individuals trained in public health understand potential problems and public policy. S/U or letter grading.

M230. Comparative Biology and Macroevolution. (4) Lecture; three hours; laboratory; three hours. Requisite: Life Sciences 1. Recommended: one introductory statistics course. Modern comparative biology provides framework for studying broad questions in evolution — How do body shapes evolve? What are dynamics of evolutionary arms race? Why are there so many species in topics? Why are there so many beetles and so few crocodiles? Did dinosaurs put brakes on diversification of mammals? Examination of why tree of life is essential to understanding patterns of biological diversity and how phylogenetic comparative methods in studies of organismal evolution can be used to evaluate evolutionary hypotheses. Concurrently scheduled with course C174. S/U or letter grading.

M231. Molecular Evolution. (4) (Same as Earth and Planetary Science M216.) Lecture; three hours; discussion; two hours. 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.

232. Advanced Ecology. (4) Lecture; three hours; discussion; one hour; field trip; three hours. Requisite: 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 botanical, 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.

235. Population Genetics. (4) Lecture; three hours; discussion; one hour. Basic principles of genetics of population, dealing with genetic structure of natural populations and mechanisms of evolution. Equilibrium conditions and non-equilibrium, and recombination of gene frequencies; polygenic inheritance, molecular evolution, and methods of quantitative genetics. S/U or letter grading.


237. Communicating Science to Informal Audiences. (5) Lecture; three hours; discussion; one hour, laboratory or fieldwork, two hours. Enforced requisite: one course from course 25, Atmospheric and Oceanic Sciences M10, Chemistry 2, 14A, 20A, Earth and Space Sciences 1, 1F, 15, Environment M10, or Life Sciences 1. Designed for juniors/seniors. Combined instruction in inquiry-based teaching methods and learning pedagogy, with six weeks of supervised teaching experience at Santa Monica Pier Aquarium. Students practice communicating scientific knowledge and receive mentoring on how to improve their presentations to develop ocean science literacy at all levels and to encourage broad public understanding of science and environmental stewardship. Need for young scientists to learn how to communicate about their science to audiences is especially critical when considering that America and two hundred and compre- hend and respond to increasingly complex issues, such as global climate change, with limited understanding of how natural world works. Concurrently scheduled with course C179. Letter grading.

M238. Ocean Biogeochecmical Dynamics and Climate. (4) (Same as Atmospheric and Oceanic Sciences M238.) Lecture; three hours. Interaction of ocean biogeochemical cycles with physical climate system. Biogeochemical processes controlling carbon dioxide and oxygen in oceans and atmosphere over past 100 million years. Anthropogenic perturbations to carbon cycle and climate. Response of ocean ecosystems to past and future global changes. Use of isotopes to study ocean biogeochemical cycles and climate. Interactions between biogeochemical cycles on land and in ocean. S/U or letter grading.

240. Physiology of Marine Animals. (4) Lecture; four hours; discussion; one hour. Designed for graduate students. Lecture and laboratory studies in mammalian, avian, tissue, organ, and animal physiology; regulatory biology; metabolic characteristics of cells, energy transformations. Given off campus at marine science center. S/U or letter grading.

243. Animal Communication. (4) Lecture; three hours; discussion; one hour. Requisite: Mathematics 3C or 32A, and Physics 1C and 4BL, or 6C or 6CH. Physical properties of animal signals and physiological mechanisms underlying their generation and reception. Lectures treat signal analysis, signal transmission, and receptor design in light of constraints placed on each sensory modality. Examples of commercial systems using visual, auditory, chemical, electrical, and magnetic cues, with emphasis on biological adaptations for efficiently signaling species-specific information. S/U or letter grading.

244. Advanced Insect Physiology. (4) Lecture; two hours; laboratory; five hours. Detailed discussion of current problems in insect physiology, with advanced laboratory. S/U or letter grading.

247. Advanced Plant Biology. (4) Lecture; three hours; discussion; two hours. Requisite: course 152 or Molecular, Cell, and Developmental Biology C141. Open to undergraduates with consent of instructor. Designed to expose first-year graduate students to topics of current interest in plant biology. Subjects include plant genetics, growth and development, organ structure, development and function, and plant-specific metabolic processes (photosynthesis, nitrogen fixation, metabolism of small molecules). S/U or letter grading.

250. Professional Skills for Biological Research. (2 to 3) Seminar, two hours. Preparation, writing, and submission of research proposals. Collection and management of field and laboratory data. Preparation of scientific presentations, review of literature, and publishing strategies. Optional field trip offered during some years for 1 extra unit. S/U or letter grading.

251. Seminar: Systematics. (2) Seminar, two to four hours. Current topics in systematic biology, including methods development and specific applications in study of phylogeny. Theme varies from year to year. May be repeated for credit. S/U or letter grading.


255. Seminar: Invertebrate Zoology. (2) Seminar, two hours. S/U or letter grading.

259. Seminar: Herpetology. (2) Seminar, three hours. Seminar on current approaches to herpetology. Main theme varies from year to year. Focus on biogeography, ecology, behavior, environmental physiology. S/U or letter grading.


261. Molecular Ecology of Plant Populations. (2) Seminar, two hours. Requisite: course M200A. Integration of ecological, population genetic, and evolutionary concepts to understand evolutionary ecology and adaptive radiation of plant populations in natural and disturbed settings, with application to both terrestrial and marine systems. Letter grading.

263. Seminar: Population Genetics. (2 or 4) Seminar, three to six hours. Seminar on topics of current interest in population genetics such as genetic drift, sociobiology, cultural evolution, conservation genetics, etc. S/U or letter grading.
264. Seminar: Stomatal Function. (4) Seminar, two hours; discussion, two hours. Open to undergraduates with consent of instructor. Structure and function of guard cells; gas exchange; environmental and hormonal regulation of stomatal responses; sensory transduction; stomatal adaptations. S/U or letter grading.


270. Seminar: Environmental Physiology. (2) Seminar, two hours. S/U grading.


273. Seminar: Entomology. (2) Seminar, two hours. Discussion of specific topics in entomology and related fields. Main theme varies from year to year, but usually emphasizes areas such as behavior, ecology, and evolution. S/U grading.


279. Seminar: Evolutionary Biology. (2) Seminar, two hours. Requisite: course M211. Emphasis on particular topics in evolutionary biology, varying in topic whenever offered. Topics may include advances in phylogenetic methodology; relationship between development and evolution; biogeography, climate change, and faunal evolution; dispersal mechanisms and macroevolutionary patterns; adaptation and diversification; macroevolutionary patterns in fossil record. S/U or letter grading.

282. Seminar: Ichthyology. (2) Seminar, two hours. Requisite: course 111 or 112. Student presentations and discussion of specific topics in ichthyology. Theme varies from year to year. May be repeated for credit. S/U or letter grading.

M286. Seminar: Statistical Problem Solving for Population Biology. (2) (Same as Statistics M286.) Seminar, two hours. Designed for graduate students. Statistical solutions to complex data analysis and/or experimental problems encountered by biology graduate students in their own research. S/U or letter grading.


M290. Seminar: Comparative Physiology. (2) (Same as Physiological Science M290.) Seminar, two and one-half hours. Discussion of specific topics in comparative physiology of animals. Topics vary from year to year, with emphasis on systems physiology, neuroethology, or behavioral physiology. S/U or letter grading.

291. Seminar: Physiology and Biochemistry of Arthropods. (2) Seminar, two hours. S/U or letter grading.

296. Seminar: Ecology and Evolutionary Biology. (1 to 4) Seminar, three hours. Advanced study and analysis of current topics in cellular, organismic, and population biology. Discussion of current research and literature in research specialty of faculty member teaching course. S/U grading.

297. Selected Topics in Ecology and Evolutionary Biology. (1 to 4) Seminar, one to three hours. Advanced study and analysis of variable research topics in research issues in ecology and evolutionary biology. Consult Schedule of Classes for topics and instructors. May be repeated for credit with consent of instructor or letter grading.

298. Seminar: Parasitology. (2) Seminar, two hours. S/U or letter grading.

375. Teaching Apprentice Practicum. (1 to 4) Seminar, to be arranged. Preparation: apprentice personnel as teaching assistant, associate, or fellow. Teaching apprenticeship under active guidance and supervision of regular faculty member responsible for curriculum and instruction at UCLA. May be repeated for credit. S/U grading.

496. Preparation for Teaching Biology in Higher Education. (2) Seminar, to be arranged. Designed for graduate students. Study of problems and methodologies in teaching biology, which includes workshops, seminars, apprentice teaching, and peer observation. S/U grading.

496. Preparation for Teaching Biology in Higher Education. (2) Lecture, two hours. Designed for graduate students. Strongly recommended as sequel to course 495 discussions on teaching, theory, and development of advanced skills. Study of methods and approaches to teaching of specific areas in biology, with emphasis on laboratory teaching, instructor/student interaction, and undergraduate motivation. S/U grading.

596. Directed Individual (or Tutorial) Studies. (2 to 12) Tutorial, to be arranged. Letter grading.

596F. Directed Individual (or Tutorial) Studies. (2 to 8) Tutorial, to be arranged. Given off campus at marine science center. S/U or letter grading.

597. Preparation for M.A. Comprehensive Examination 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 grading.


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**ECONOMICS**

**College of Letters and Science**

**UCLA** 8283 Bunche Hall Box 951477 Los Angeles, CA 90095-1477 (310) 825-1011 fax: (310) 825-9528 http://www.econ.ucla.edu

Kathleen M. McGarry, Ph.D., Chair Joseph M. Ostroy, Ph.D., Vice Chair Andrew G. Atkeson, Ph.D., Director of Business Economics

**Professors**


Kathleen M. McGarry, Ph.D. Lee E. Ohanian, Ph.D. Joseph M. Ostroy, Ph.D. John G. Riley, Ph.D. Aaron Tornell, Ph.D. William R. Zame, Ph.D.

**Professors Emeriti**


**Associate Professors**

Simon A. Board, Ph.D. Leah Platt Bousant, Ph.D. Francisco J. Buera, Ph.D. Axel T. Burstein, Ph.D. Maurizio Mazzocco, Ph.D. Ichiro Obara, Ph.D. Sule Oezler, Ph.D. Till M. von Wachter, Ph.D. Pierre-Olivier Weill, Ph.D. Mark L. Wright, Ph.D.

**Assistant Professors**

Maria Casanova Rivas, Ph.D. Dennis N. Cheverikov, Ph.D. Jermaj Copic, Ph.D. Pablo Fajgelbaum, Ph.D. W. Walker Hanlon, Ph.D. Edward C. King, Ph.D. Zhipeng Liao, Ph.D. Aprajit Mahajan, Ph.D. Moritz Meyer-ter-Vehn, Ph.D. Marek G. Pycia, Ph.D. Tomas M. Sadzik, Ph.D. Shuyong Sheng, Ph.D. Conna A. Snider, Ph.D.

**Scope and Objectives**

The economics undergraduate program is designed for students who wish to gain a thorough understanding of both empirical and theoretical approaches to economics. Emphasis is on economic principles applied to resolving interpersonal conflicts of interest and coordinating productive activity in a world of scarce resources. Because students must gain a thorough theoretical and technical competence before extensive study of the applied specializations in the discipline, the analytic core of the major in Economics is closely structured. Some courses are appropriate for nonmajors, but the curriculum is most suitable for students who wish to make the study of economics the primary focus in their undergraduate education.

The undergraduate major provides analytical training in reference to socioeconomic phenomena and provides an excellent theoretical background for those pursuing graduate education in economics, law, management, public administration, journalism, social welfare, architecture and urban planning, and education.

The graduate program is designed primarily for students pursuing the Ph.D. degree. The doc-
torate 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 129B; 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.

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:** Ten upper division economics courses as follows: Economics 101, 102, 103, 103L; one course from at least three different fields in economics selected from the major fields list below; and three Economics Department upper division elective courses. No more than two of the elective courses may also be selected from Management 120A, 120B, 122, 127A, 130A, 130B.

Each course must be taken for a letter grade. Former courses 100, 110, and 120 may not be included among the 10 upper division courses. Transfer credit is subject to department approval; consult an undergraduate counselor before enrolling in any courses for the major.

To graduate, students must have at least a 2.0 grade-point average in their upper division major courses, with grades of C- or better in Economics 101, 102, 103, and 103L.

**Major Fields**

Applied microeconomics (courses 106H, 130, 131, M134, M135, M136, 137, 150, 151, 183); industrial organization (courses 106E, 106F, 106P, 106T, 170); international and development economics (courses 111, 112, 121, 122); mathematical economics and econometrics (courses 106D, 106G, 107, 141, 142, 143, 145); money and banking (courses 106F, 106M, 106V, 160, 161, 164).

**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 before applying (Economics 101 applies on the major preparation grade-point average).

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.

**Business Economics Premajor**

While students are completing the preparation courses for the major, they may be classified as Business Economics premajors. (Transfer students who wish to enter UCLA as Business Economics premajors, must meet the 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; 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](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, 103L, and at least two courses from the 106 series; English Composition 131B; five upper division elective courses in economics and management (no more than three management courses from Management 108, 120A, 120B, 122, 123, 124, 126, 127A, 127B, 130A, 130B, 140 may be applied toward the elective requirement). In addition to Economics 103 and 103L, at least two economics courses with laboratories must be completed and may be selected from either the Economics 106 series or an economics elective.

Each upper division major course must be taken for a letter grade. Transfer credit for any of the major courses is subject to department approval; consult 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 completed the premajor courses by the end of Fall Quarter 2010 were 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.

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 sociosciences 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 Noneconomics Courses: Geography 187, History 105C, 108B, Jewish Studies 142, Political Science 132A, 157, Turkic Languages 190

Former Soviet Union

Languages: Armenian, Russian


Individual Concentration

Language, geographical area, and noneconomics 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.

Honor 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 with 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 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, 198A, 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 the Graduate Requirements for UCLA Graduate Degrees, available at the Graduate Division website, http://grad.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 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 and distribution of income through price system, P/NP or letter grading.

2. Principles of Economics. (4) Lecture, three hours; discussion, one hour. Enforced requisite: course 1. Not open to students with credit for former course 100. Introduction to principles of economic analysis, economic institutions, and issues of economic policy. Emphasis on aggregate economics, including national income, monetary and fiscal policy, and international trade, P/NP or letter grading.

3. Introductory Economics. (4) Lecture, three hours. Not open to students with credit for course 1, 2, or former course 100. Principles of economics as tools of analysis. Presentation of set of concepts with which to analyze wide range of social problems that economic theory illuminates. May not be used to fulfill entrance requirements for any Economics Department major. P/NP or letter grading.

41. Statistics for Economists. (4) Lecture, three hours; discussion, one hour. Enforced requisites: courses 1, 2, one course from Mathematics 31B, 31BH, 31E, 59A. Laws of demand, supply, returns, and costs; price and output determination in different market situations. P/NP or letter grading.

70. Economic Toolkit. (2) Lecture, two hours. Should be taken prior to taking course 11, Coverage of essential mathematical and spreadsheet tools that Economics majors use in their core courses and upper division elective courses. Review of algebra (graphing lines, solving systems of equations), geometry (determining areas), calculus (first derivatives, partial differentiation, elementary integral calculus), and Excel (handling data, using simple arithmetic, mathematical, and financial functions, use of Solver). Offered in summer only. P/NP grading.

Upper Division Courses

101. Microeconomics Theory. (4) Lecture, three hours; discussion, one hour. Requisite: course 101. Theory of factor pricing and income distribution; general equilibrium; implications of pricing process for optimum 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, and 41 or Statistics 11 or 100A. Enforced corequisite: course 103L. Introduction to theory and practice of econometrics, with emphasis on using statistical approaches to analyze data and make inferences about economic phenomena. P/NP or letter grading.

106A. Economics in Practice. (4) Formerly numbered 188B.) Seminar, three hours. Enforced requisites: courses 11, 101, 102. Enforced corequisite: course 106AL. 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 presentations, 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.

106AL. Economics in Practice Laboratory. (1) Lecture, one hour; laboratory, one hour. Requisites: courses 11, 101, 102. Enforced corequisite: course 106A. Case-based analysis requiring students to apply material from course 106A to real-world problems regarding issues such as economic theory and empirical methods. Hands-on data collection and problem solving and presentation of student analyses both orally and in writing. P/NP or letter grading.

106D. Designed Markets. (4) Lecture, three hours; discussion, one hour. Requisites: courses 11, 101. Enforced corequisite: course 106DL. Discussion of markets and other institutions that were purposely designed, mostly by economists. Choices designers face when designing such markets. Markets and their context and corresponding economic models. Topics include matching between 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.

106DL. Designed Markets Laboratory. (1) Lecture, one hour; laboratory, one hour. Requisites: courses 11, 101, 102. Enforced corequisite: course 106DL. Discussion of markets and other institutions that were purposely designed, mostly by economists. Choices designers face when designing such markets. Markets and their context and corresponding economic models. Topics include matching between 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. Hands-on data collection and problem solving and presentation of student analyses both orally and in writing. P/NP or letter grading.

106E. Economics of Entrepreneurship. (4) Lecture, three hours; discussion, one hour. Enforced prerequisite: course 101. Enforced corequisite: course 106E. Case-based analysis requiring students to apply material from course 106D to real-world problems regarding topics such as 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. Hands-on data collection and problem solving and presentation of student analyses both orally and in writing. P/NP or letter grading.


106G. Economics of Entrepreneurship Laboratory. (1) Lecture, one hour; laboratory, one hour. Requisite: course 101. Enforced corequisite: course 106G. Case-based analysis requiring students to apply material from course 106E to real-world problems regarding topics involving combining elements of strategy, marketing, and entrepreneurial finance courses. Examination of both strategic decisions of entrepreneurs (pricing, advertising, deterring entry) and more practical issues (funding, business plans, patents). Hands-on data collection and problem solving and presentation of student analyses both orally and in writing. P/NP or letter grading.

106H. Finance Laboratory. (1) Formerly numbered 106FL.) Lecture, one hour; laboratory, one hour. Requisite: course 102. Enforced corequisite: course 106F. Case-based analysis requiring students to apply the-
ory from course 106F to real-world problems regarding topics such as discounted cash flow analysis, overlapping games, and applications to market design.

106E. Introduction to Game Theory. (4) Lecture, three hours; discussion (when scheduled). Requisite: course 101. Enforced corequisite: course 106GL. Enrollment priority to Business Economics majors. Introduction to basic ideas of game theory and strategic thinking. Discussion of ideas such as dominance, backward induction, Nash equilibrium, commitment, credibility, asymmetric information, and signaling, with application to examples from politics, business, and other real-life situations. Letter grading.

106GL. Introduction to Game Theory Laboratory. (1) Lecture, one hour; laboratory, one hour. Requisite: course 101. Enforced corequisite: course 106G. Base-case analysis requiring students to apply material from course 106F to real-world problems involving game theory and strategic thinking in economics, politics, business, and other real-life situations. Hands-on data collection and problem solving and presentation of student analyses in writing with possible oral presentations. P/NP or letter grading.


106L. Economics of Technology and E-Commerce. (4) Lecture, one hour; laboratory, one hour. Requisite: courses 11, 101, 103. Enforced corequisite: course 106TL. Use of rigorous economic tools to analyze world of technology and e-commerce. Examination of economic theory, empirical case studies and case studies to study variety of new markets. Topics include bidding in online auctions, two-sided markets, matching markets, and reputation mechanisms. Written case on one particular firm and presentation required. P/NP or letter grading.


106N. Financial Markets and Financial Institutions Laboratory. (1) Lecture, one hour; laboratory, one hour. Requisite: courses 11, 101, 102. Enforced corequisite: course 106NL. More advanced topics in financial markets to link models students have learned in prior courses to patterns observed in financial markets and to understand when it is that further theoretical refinement is required. Course account for observed patterns. Development of understanding of potential effects of monetary and regulatory policies on financial markets. Topics include bond market, stock market, foreign exchange market, financial crises, and financial regulation. Analysis and discussion of lessons of subprime crisis and European sovereign debt crisis. P/NP or letter grading.

106PL. Investments. (4) Lecture, three hours. Requisites: courses 11, 101, 103. Application of empirical tools from microeconomics to provide insights into problems confronting low-income countries today and to evaluate policies that are likely to be effective in improving well-being of poorest on globe. P/NP or letter grading.


106PL. Pricing and Strategy Laboratory. (1) Lecture, one hour; laboratory, one hour. Requisite: course 101. Case-based analysis requiring students to apply material from course 106P to real-world problems involving linear programming and shadow pricing, peak load pricing, two-part pricing, strategic pricing, and auctions and bidding. P/NP or letter grading.

106PL. Investments. (4) Lecture, three hours. Requisites: courses 11, 101, 102. Enforced corequisite: course 106PL. Application of empirical tools from microeconomics to provide insights into problems confronting low-income countries today and to evaluate policies that are likely to be effective in improving well-being of poorest on globe. P/NP or letter grading.


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 confronting low-income countries today and to evaluate policies that are likely to be effective in improving well-being of poorest on globe. P/NP or letter grading.


121. International Trade Theory. (4) Lecture, three hours; discussion, one hour. Requisite: course 101. Open to students with credit for former course 120. Theory of international trade: bases, direction, and evolution of trade; determinants of tariffs, quantitative restrictions, and international integration. Effects of free and restricted trade on economic welfare and political stability. P/NP or letter grading.

122. International Finance. (4) Lecture, three hours; discussion, one hour. Requisite: course 102. Enforced corequisite: course 122L. Not open to students with credit for former course 120. Emphasis on interpretation of balance of payments and adjustment to national and international equilibrium through changes in exchange rates, foreign exchange markets, and foreign direct investment. Other topics include making international payments, determination of exchange rates under various monetary systems, capital movements, exchange controls, and multinational financial operations. P/NP or letter grading.

12LS. International Finance Laboratory. (1) Lecture, one hour; laboratory, one hour. Requisite: course 102. Enforced corequisite: course 122L. Case-based analysis requiring students to apply material from course 122L to real-world problems involving international trade. Topics and analysis include balance of payments, exchange rates, monetary arrangements, capital flows, exchange controls, and international monetary operations. Hands-on data collection and problem solving and presentation of student analyses in writing. P/NP or letter grading.

123. Foreign Exchange Market and Exchange Rate Forecasting. (4) Lecture, three hours. Requisite: courses 103, 122. Empirically based advanced presentation of foreign exchange market, financial instruments used in this market, and exchange rate determination that builds on course 122 and emphasizes real-world applications of theoretical models. Students expected to generate exchange rate forecasts using a variety of techniques. Emphasis on understanding and evaluation of forecast errors. Some intensive use of computer to learn how to write computer programs to generate exchange rate forecasts and evaluate accuracy of student forecasts. Development of foreign exchange market and exchange rate fluctuation gained and acquisition of empirical skills necessary to make practical use of real-world data. P/NP or letter grading.


130L. Public Economics Laboratory. (1) Lecture, one hour; laboratory, one hour. Requisites: courses 11, 101, 103. Enforced corequisite: course 130L. Role of government in market economy. Alternative justifications for government intervention in the market: Principles and examples of government programs (especially social insurance and health), 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. Emphasis on interpretation of several detailed economic models, including models of addiction, demand for healthcare, demand for insurance, nonprofit behavior, and other models. Emphasis on quantitative insights 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. Requisite: courses 11, 101. In-depth examination of selected topics related to current policy debates. Topics vary from year to year but typically emphasize tax pol-
icy or social insurance. Topics may include optimal taxation; tax inefficiencies and their implications for labor supply; social insurance and redistribution and personal income tax; corporate taxation and implications for firms' investment and financing decisions; Social Security and SSDI reform; and welfare programs. P/NP or letter grading.

M134. Economic Dynamics. (4) (Formerly numbered M134A) (Same as Environment M134.) Lecture, three hours. Requisites: course 41 or Statistics 12 and 13, or 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 consequences. 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 means. 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 raised when economic analysis is applied in urban setting. Topics include urbanization and urban growth, housing markets, location decisions of households and firms, transportation, urban labor markets, and local public sector. P/NP or letter grading.

140. Inequality: Mathematical and Econometric Approach. (4) Lecture, three hours. Requisite: courses 101, 103, and Mathematics 33A or 115A. In past decades economists have learned remarkable amount about how society works. Increased understanding has led economists to reject simple economic models of research — explicit mathematical models and eclectic statistical techniques — to topics like healthcare, crime, education, and immigration, leading to increased recognition of need for rigorous tools that measure how inequality has increased in U.S., how America differs from other rich countries, and what causes inequality. Study of this work, with focus on two important influences on inequality — education and health. P/NP or letter grading.

141. Topics in Microeconomics: Mathematical Finance. (5) (Formerly numbered 141A) Lecture, three hours; computer laboratory, one hour. Requisite: course 101, Mathematics 32A, or either Statistics 100A or Mathematics 170A. Economics of financial markets, competitive equilibrium with time and uncertainty, one period securities market, complete model, market completeness. P/NP or letter grading.

142. Topics in Microeconomics: Probabilistic Microeconomics. (4) Lecture, three hours. Requisite: course 101. Combination of basic probability introduced in finance, with mathematical microeconomic models presented in courses 11 and 101 in order to explain phenomena such as insurance, job search, and stock market behavior. Optimal production and consumption under uncertainty. Review of principal-agent and introduction to alternative measures of risk and risk aversion. P/NP or letter grading.

143. Advanced Econometrics. (4) Lecture, three hours; discussion, one hour; laboratory, one hour. Requisite: course 103. Not open for credit to students with credit for former course 147A or 147B. Heteroskedasticity, limited dependent variable, panel data, time-series, market microstructure. Enforced corequisite: course 147A or 147B. P/NP or letter grading.

145. Topics in Microeconomics: Mathematical Economics. (4) Lecture, three hours. Requisite: course 101. Possible topics include game theory; competitive equilibrium analysis; examination of market failure; 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 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 C296A-C296B-C296C. P/NP or letter grading.

150. Labor Economics. (4) Lecture, three hours. Requisites: courses 11, 101, 103. Enforced corequisite: course 150. Case-based analysis requiring students to apply theoretical tools from course 150 to real-world problems involving labor supply and labor demand, household production decisions, lifetime aspects of labor supply, short-run and long-run labor demand, monopsony in labor market, quasi-fixed labor costs and labor demand, human capital, and other extended topics. Hands-on data collection and problem solving and presentation of student analyses both orally and in writing. P/NP or letter grading.

151. Topics in Labor Economics. (4) Lecture, three hours. Requisites: courses 11, 101, 103. Enforced corequisite: course 150. Selected topics in labor theory; income distribution; business cycles and unemployment; investments in human capital and life cycles; migration; human fertility; marriage and divorce, etc. P/NP or letter grading.

C156A-C156B-C156C. Seminars: Labor Economics. (4-4-4) Seminar, three hours. Requisites: courses 11, 101, 102. Limited to seniors. Overview of most current developments in labor economics for advanced undergraduate and graduate students. Introduction to graduate-level student participation 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 C266A-C266B-C266C. P/NP or letter grading.


ed, discussed, and criticized by visiting experts, UCLA faculty members, and advanced graduate students. Planning and supervising practicum 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 C246A-C246B-C246C. P/NP or letter grading.


188. Career Development. (1) Lecture, one hour. Enrollment priority to departmental majors. Designed to provide Business Economics majors with key knowledge and practical skills used in real world that complements additional academic and life experiences to maximize internal and external communication, and presentation skills and strengthen resume building. Coverage of career paths in business profession in various aspects to broaden students' knowledge of career opportunities. Review of current business environment, financial markets, economy, unemployment, banking crises, market updates, and all related business topics. P/NP grading.

192. Undergraduate Practicum in Economics. (3) Seminar, two hours. Limited to juniors/seniors. Training and supervised practicum for advanced undergraduate students. Students assist in preparation of course materials and development of innovative programs with guidance of faculty members. P/NP or letter grading.

195A-195B. Community or Corporate Internships in Economics I, II. (4) (Formerly numbered 191A, 191B.) Lecture, three hours. Requisite: course 11. Limited to junior/senior Economics, Business Economics, Economics/International Area Studies, and Mathematics/Economics majors. Internship to be supervised by Economics Department. Further supervision to be provided by business or entity for which student is doing internship. Students meet on regular basis with instructor and provide periodic reports of their experience. May not be counted toward major requirements. Only 8 units from courses 195A and 195B may be applied to toward undergraduate degree. Individual contract with supervising faculty member required. P/NP or letter grading.

195C. Community and Corporate Internships in Economics. (4) (Formerly numbered 195C.) Tutorial, to be arranged; fieldwork, eight to 10 hours. Requisites: courses 11, 101. Limited to juniors/seniors. Undergraduate or professional, or nonprofit setting coordinated by Economics Department. Students complete weekly written assignments, attend bi-weekly meetings with graduate student coordinator, and write final research paper. Faculty and graduate student coordinator construct series of reading assignments that examine issues related to internship site. May not be applied toward major requirements. May be repeated for credit with consent of department. Individual contract with supervising faculty member required. P/NP or letter grading.

198A. Honors Research in Economics I, II. (4) Tutorial, three hours. Requisites: courses 11, 101, 102. Limited to senior departmental honors program students. First term of two-term sequence in which students develop honors thesis or comprehensive research project under direct supervision of faculty member. Individual contract required. Letter grading. Second term of two-term sequence in which students complete honors thesis or comprehensive research project under direct supervision of faculty member. Individual contract required. Letter grading.

198B. Honors Research in Economics II. (4) Tutorial, three hours. Requisite: course 198A. Limited to senior departmental honors program students. Second term of two-term sequence in which students complete honors thesis or comprehensive research project under direct supervision of faculty member. Individual contract required. Letter grading.

198A. Directed Research in Economics. (4) Tutorial, three hours. Requisites: courses 11, 101, 102. Limited to juniors/seniors. Supervised individual research or investigation under guidance of faculty mentor. Culminating paper or project required. May be repeated twice but may be applied only once toward major requirements. Individual contract required. P/NP or letter grading.

198B. Directed Research in Economics. (4) Tutorial, three hours. Requisites: courses 11, 101, 102. Limited to departmental honors program students. Second term of two-term sequence in which students complete honors thesis or comprehensive research project under direct supervision of faculty member. Individual contract required. Letter grading.


200B. Mathematical Methods in Economics II. (4) Lecture, three hours; laboratory, two hours. Should be taken prior to or concurrent with course 201B. Linear algebra and its application 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:


202A-202B-202C. Macroeconomics. (4-4-4) Lecture, three hours. S/U or letter grading:


203A. Probability and Statistics for Econometrics. (4) Lecture, three hours. Provides statistical tools necessary to understand econometric techniques. Random variables, distribution and density functions, sampling, estimators, estimation techniques, hypothesis testing, and statistical inference. Use of econometric problems and examples. S/U or letter grading.


M204A-204Z. Applications of Economic Theory. (4 each) Lecture, three hours. S/U or letter grading:

M204A-204B-204C. California Population Research Topical Series. (4-4-4) (Formerly numbered 204A-204B-204C.) Seminar, three hours every other week for three terms. Requisites: courses 201A, 201B, 201C, Health Policy and Management M208A, M208B, Lifespan 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, M204M, and letter (M204N) grading.
204R. (4) Lecture, three hours. Preparation: compi-
le of first-year microeconomics and graduate
economics. Emphasis on multivariate constrained
optimization. S/U or letter grading.
205. Economic Modeling. (4) Lecture, three hours.
Development of modeling skills by considering se-
quence of economic issues (e.g., peak load pricing,
regulation, monopoly, capital asset pricing, Pareto ef-
ciciency). Emphasis on multivariate constrained opti-
mization. S/U or letter grading.
207. History of Economic Thought. (4) Lecture,
three hours. Study of the history of economic think-
ing work of Smith, Ricardo, and Mill, and develop-
ments from 1870s, including contributions of major
figures of marginalist revolution, socialist contro-
sery, and history of welfare economics. S/U or letter
grading.
M208. Introduction to Demographic Methods. (4)
(Same as Biostatistics M208, Community Health Sci-
ences M208, and Sociology M213A). Lecture, four hours.
Preparation: Statistical computing. Introduction to meth-
ods of demographic analysis. Topics include demo-
graphic rates, standardization, decomposition of differ-
ences, life tables, survival analysis, cohort analysis, birth interval analysis, mod-
els of population growth, stable populations, popula-
tion projection, and demographic data sources. Letter
grading.
Economic Theory
211A. Contract Theory. (4) Lecture, three hours.
Preparation: introductory probability. Enforced requi-
site: course 201C. Study of trading relationships be-
tween small number of agents. Coverage of many
methods and techniques used in models of moral haz-
ard, adverse selection, and incomplete contracting, start-
ing with standard moral hazard and informa-
tion design and development of their dynamic coun-
terparts. Consideration of environments where agents
cannot use formal contracts, studying relational con-
tacts and incomplete contracts with no control over
Analysis of a wide variety of applications from industrial
organization, corporate finance, personnel econom-
ics, and public administration. S/U or letter grading.
211B. Economics of Uncertainty, Information,
and Games. (4) Lecture, three hours. Preparation: intro-
ductive probability. Enforced requisite: course 201C.
Theory of individual decision making under uncertain-
ty applied to topics such as asset pricing models, ad-
verse selection, moral hazard, bargaining, signaling,
auctions, and search. S/U or letter grading.
211C. Game Theory and Economic Applications. (4)
Lecture, three hours. Preparation: introductory prob-
ability. Enforced requisite: course 201C. Intended
for students who are interested in doing research in
microeconomics and for students who want to
acquire good theory background to do applied work.
Coverage of combination of standard results in field
and topics selected from, including notions of equilib-
rium in static and dynamic games, reasoning in
games, repeated games, games of incomplete infor-
mation, and experiments. S/U or letter grading.
212A-212Z. Theories of First Year Microecon-
omics. (4 each) Lecture, three hours. Current research in microeco-
nomic theory. Content varies. Courses in this se-
quence not ordinarily given every year. May be re-
peated for credit. S/U or letter grading.
212A. Search Theory. (4) Lecture, three hours. Prepa-
ration: calculus, introductory probability. Price search-
ing models of consumer choices, competition, mar-
tingales, and applications to theory of firm. May be repeated for cred-
its. S/U or letter grading.
212B. Applied Game Theory. (4) Lecture, three hours.
Preparation: calculus, introductory probability. Use of the
tools of game theory in study bargaining, monop-
opoly, and oligopoly. Use of theory of mecha-
nisms to study auction design and imperfectly com-
petitive markets. May be repeated for credit. S/U or letter grading.
213A-213B. General Equilibrium and Game Theory. (4-
4) Lecture, three hours. Requisite: course 210C. 
Selected advanced theoretical topics of current inter-
est and introduction to modern mathematical eco-
nomics, including general equilibrium theory and
game theory. S/U or letter grading.
214A-214Z. Topics in Mathematical Economics. (4-
each) Lecture, three hours. Requisite: course 213B.
Topics in applications of current interest to micro-
economics and macroeconomics. S/U or letter grading.
214B-214Z. Topics in Mathematical Economics. (4-
each) Lecture, three hours. Requisite: course 213B. 
Topics in applications of current interest to micro-
economics and macroeconomics. S/U or letter grading.
214A. General Equilibrium Theory. (4) Lecture, three hours.
Preparation: 211A and 211B. General equilibrium, game theory, cooperative and noncooperative approach to com-
petitive equilibrium theory, perfectly competi-
tive equilibria, no-surplus condition, and applications
to mechanism design and market models. May be repeated for credit. S/U or letter grading.
215. Topics in Applied Game Theory. (4) (Same as
Political Science M208B). Lecture, three hours.
Preparation: calculus or introductory probability. De-
signed for graduate economics and political science
students. Survey and application of major solution concepts to models of bargaining, oligopoly, cost al-
location, and voting power. S/U or letter grading.
(4-4-4) Seminar, three hours. Requisite: course 210C.
Preparation for dissertation and dissertation writers.
Discussion of advanced topics and recent developments in game 
theory, information and uncertainty, and general equi-
librium theory. Presentation of recent papers pub-
lished and unpublished in economic theory as well as
research of instructor and students. In-class presen-
tation expected. S/U or letter grading.
219A-219B-219C. Workshops: Economic Theory
and Mathematical Economics. (4-4-4) Lecture, three
hours. Workshops for dissertation and disser-
tation writers. Research in progress presented,
discussed, and criticized by visiting experts, UCLA
faculty members, and advanced graduate students.
Research paper required. S/U grading.
221A-221B-221C. Workshops: Monetary Econom-
is. (4-4-4) Seminar, three hours. Workshops for disser-
tation and dissertation writers. Research in progress presented,
discussed, and criticized by visiting experts, UCLA faculty mem-
bersons, advanced graduate students. Research paper or presentation required. S/U grading.
229A-229B-229C. Workshops: Economic Theory.
(4-4-4) Seminar, three hours. Workshops for disser-
tation and dissertation writers. Research in progress presented,
discussed, and criticized by visiting experts, UCLA faculty mem-
bers, advanced graduate students. Research paper required. S/U grading.
Econometrics
231A. Econometrics: Single Equation Models. (4)
Lecture, three hours. Linear regression model, speci-
cation, estimation functional form, identification,
coefficient estimation, sensitivity analysis, and result-
s in variables. S/U or letter grading.
231B. System Models. (4) Lecture, three hours. Mul-
variate regression, errors in variables, simultaneous equations, identification, proxy variables, latent vari-
ables, factor analysis of panel data, asymptotic distri-
bution theory. S/U or letter grading.
M232A-232Z. Topics in Econometrics. (4 each)
Lecture, three hours. Requisites: courses 231A, 231B.
Current research in econometrics. Content varies.
Courses in this sequence not ordinarily given every
year. May be repeated for credit. S/U or letter grading.
M232A. Bayesian Econometrics. (4) (Same as Politi-
cal Science M208E). Lecture, three hours. Requisites: 
courses 231A, 231B. Subjective probability, introduc-
tion to Bayesian theory. Bayesian analysis of regres-
sion, sensitivity analysis, simulation of models, 
crime, criticized for. S/U or letter grading.
232B. Time Series. (4) Lecture, three hours. Requi-
sites: courses 231A, 231B. Stationary stochastic pro-
cesses, Box/Jenkins methods, spectral analysis, for-
casting, rational expectation models, analysis of mac-
roeconomic data. May be repeated for credit. S/U or letter grading.

Economics

238A-238B-238C. Proseminars: Econometrics. (4-4-4) Seminar, three hours. Quarterly seminars for pre-dissertation 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, and advanced graduate students. Research paper required. S/U grading.

Economic History

241. Economic History of Western Europe. (4) Lecture, three hours. Designed for graduate students. Seminar on European economic history, with emphasis on evolution of institutions and growth. Serfdom, medieval agriculture and agricultural revolution, demographics, industrial revolution, imperial expansion, and decline of Britain. S/U or letter grading.


243A-243Z. Topics in Economic History. (4 each) Lecture, three hours. Current research in economic history. Content may be repeated for credit. S/U or letter grading.

246A-246B-246C. Seminars: Economic History. (4-4-4) Seminar, three hours. Designed for predissertation and dissertation writers. Overview of most current developments in economic history for advanced undergraduate and graduate students. Introduction to graduate-level research in this field. Different topics each quarter, presentations, 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 C196A-C196B-C196C. S/U grading.


249A-249B-249C. Von Grepp 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, and advanced graduate students. Concurrently scheduled with courses C196A-C196B-C196C. S/U grading.

Public Finance


251B. Cost-Benefit Analysis of Public Projects and Programs. (4) Lecture, three hours. Requisite: course 251A. Presentation of those aspects of applied capital theory relating to economic decisions concerning investment projects in first part of course. Differences between social and private benefits and costs (shadow prices) for foreign exchange, capital, and labor, with examples from public investment decisions, in second part of course. S/U or letter grading.

252. Economics of Federalism. (4) Lecture, three hours. Theories of perfect games and social organization. Role of government, collective goods, collective defense, local public goods, spillovers, and intergovernmental relations. S/U or letter grading.


254A-254B-254C. Workshops: Public Economics. (4-4-4) Lecture, three hours. Designed for graduate students. Workshops for advanced graduate students. Research in progress discussed by visiting experts, UCLA faculty members, visiting experts. S/U grading.

Labor Economics


261B. Labor Economics II. (4) Lecture, three hours. Requisite: course 261A. Models of life-cycle learning and work behavior, with particular emphasis on recent literature examining the labor force behavior and experiences of women. S/U or letter grading.

262A-262Z. Topics in Labor Economics. (4 each) Lecture, three hours. Current research in labor economics. Content may be repeated for credit. S/U or letter grading.

262D. Development Economics. (4) Lecture, three hours. Preparation: completion of first-year graduate microeconomics and econometrics courses. Coverage of important topics in microeconomics of development, such as health, education, risk coping, savings, credit, and household economics. Discussion of empirical methods. S/U or letter grading.

262F. Public Sector Microeconomics. (4) Lecture, three hours. Preparation: completion of first-year graduate microeconomics and econometrics courses. Coverage of topics related to tax incidence, deadweight loss, public expenditure, income taxation and transfer programs, with emphasis on impacts of such programs on labor supply and savings, social security, unemployment insurance, and other insurance programs. S/U or letter grading.

262G. C266A-C266B-C266C. Seminars: Labor Economics. (4-4-4) Seminar, three hours. Designed for pre-dissertation and dissertation writers. Overview of most current developments in labor economics for advanced undergraduate and graduate students. Introduction to graduate-level research in this field. Different topic each week, with presentation and discussion of new papers. Research in progress presented, discussed, and critiqued by visiting experts, UCLA faculty members, and advanced graduate students. Concurrently scheduled with courses C176A-C176B-C176C. S/U (C266B) and S/U or letter (C266A, C266C) grading.


271B. Industrial Organization, Price Policies, and Regulation II. (4) Lecture, three hours. Requisite: course 271A. Study of firm organization and pricing under conditions of less than perfect competition; information costs and advertising; economic and legal analysis of marketing practices such as discrimination, tie-in selling, resale price maintenance, exclusive dealing, and territorial arrangements. S/U or letter grading.


272A-272Z. Topics in Industrial Organization. (4 each) Lecture, three hours. Preparation: completion of first-year graduate microeconomics and econometrics courses. Content varies. May be repeated for credit. S/U or letter grading.

273A. Public Utility Regulation. (4) Lecture, three hours. Theory, practice, and regulation of public utility services, with emphasis on regulation in electric power, gas, water, telecommunications, broadcasting, and other regulated industries; experiences of unregulated monopoly and public enterprises by way of contrast. S/U or letter grading.

276A-C276B-C276C. Seminars: Industrial Organization. (4-4-4) Seminar, three hours. Designed for predissertation and dissertation writers. Overview of most current developments in industrial organization for advanced undergraduate and graduate students. Introduction to graduate-level research in this field. Different topic each week, with presentation and discussion of new papers. Research in progress presented, discussed, and critiqued by visiting experts, UCLA faculty members, and advanced graduate students. Concurrently scheduled with courses C176A-C176B-C176C. S/U (C276B) and S/U or letter (C276A, C276C) grading.

278A-278B-278C. Proseminars: Industrial Organization and Regulation. (4-4-4) Seminar, three hours. Quarterly seminars 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. Presentation of new papers. Research in progress presented, discussed, and critiqued by visiting experts, UCLA faculty members, and advanced graduate students. Concurrently scheduled with courses C176A-C176B-C176C. S/U or letter grading.

279A-279B-279C. Proseminars: Business Organization and Regulation. (4-4-4) Lecture, three hours. Workshops for predissertation and dissertation writers. Research in progress presented, discussed, and critiqued by visiting experts, UCLA faculty members, advanced graduate students. Research paper required. S/U grading. Also see Management 262 (pricing policy)

International Economics


282A-282Z. Topics in International Economics. (4 each) Lecture, three hours. Current research in international economics, topic content varies. May be repeated for credit. S/U or letter grading.

284. Soviet Economic Theory and Organization. (4) Lecture, three hours. Overall strategy of planning used by the U.S.S.R. planners and specific planning methods, to cover not only instructions and objectives but also institutional arrangements. Intended and unintended outcomes of methods. S/U or letter grading.


Development Economics


286B. Cost-Benefit Analysis of Development Projects. (4) Lecture, three hours. Requisite: course 286A. Methodology for evaluating investment projects, with special attention to types of issues that arise in developing countries. Discussion of social versus private evaluation criteria; applications to high-way, 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.


287B. Economic Development in East Asia. (4) Lecture, three hours. Recent economic history of East Asia, focusing on postwar development of Japan, Korea, and China. Emphasis on role of international investment and trade, especially with U.S., in area's economic development. May be repeated for credit. S/U or letter grading.

287C. Topics in Economic Development. (4) Lecture, three hours. Designed for graduate students. Topics in monetary and exchange rate policy in developing countries. Students expected to develop analytical tools and underlying policy issues. May be repeated for credit. S/U or letter grading.

288A-288B-289C. Proseminars: International and Development Economics. (4-4-4) Seminar, three hours. Quarterly seminars for predissertation and dissertation writers on current issues in international trade and finance and development economics. Presentation of work-in-progress for feedback from faculty and other graduate students. Presentation or research paper required. S/U grading.

Urban Economics


293A-293Z. Topics in Urban Economics. (4 each) Lecture, three hours. Current research in urban and regional economics. Content varies. Serves as forum for presentation of papers on urban economics by students, UCLA faculty members, and visitors. May be repeated for credit. S/U or letter grading.

C295A-C295B-C295C. Seminars: Asset Pricing. (4-4-4) Seminar, three hours. Designed for predissertation and dissertation writers. Overview of most current developments in asset pricing theory for advanced undergraduate and graduate students. Introduction to graduate-level research in this field. Different topic each week, with presentation and discussion of new papers. Research in progress presented, discussed, and criticized by visiting experts, UCLA faculty members, and advanced graduate students. Concurrently scheduled with courses C146A-C146B-C146C. S/U grading.

297A-297B-298C. Proseminars: Asset Pricing. (4-4-4) Seminar, three hours. Quarterly seminars for predissertation and dissertation writers on empirical issues in area of asset pricing, broadly defined. Presentation of work-in-progress or background material for proposed dissertation topics that are discussed and criticized by faculty members and fellow students. Presentation or research paper required. S/U grading.

Special Studies

375. Teaching Apprentice Practicum. (1 to 4) Seminar, to be arranged. Preparation: apprentice personnel employment as teaching assistant, associate, or fellow. Teaching apprenticeship under active guidance and supervision of regular faculty member responsible for curriculum and instruction at UCLA. May be repeated for credit. S/U grading.

495. Teaching College 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, materials, and evaluation. May be repeated for credit. S/U grading.

501. Cooperative Program. (2 to 8) Tutorial, to be arranged. Preparation: consent of UCLA graduate 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. Individual Study. (2 to 8) Tutorial, to be arranged. Directed individual study or research. S/U grading.


**EDUCATION**

Graduate School of Education and Information Studies

UCLA

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Megan L. Franke, Ph.D., Chair

**Professors**

Walter R. Allen, Ph.D. (Allan Murray Cartter Professor of Higher Education)

Allison L. Bailey, Ed.D.

Mitchell J. Chang, Ph.D.

Christina A. Christie, Ph.D.

Sol Cohen, Ph.D.

Megan L. Franke, Ph.D.

Louis M. Gomez, Ph.D. (MacArthur Foundation Professor of Digital Media and Learning)

Sandra H. Graham, Ph.D. (Presidential Professor of Education and Diversity)

Sandra Harding, Ph.D.

Tyrence C. Howard, Ph.D.

Synthia Hurado, Ph.D.

Connie L. Kasari, Ph.D.

Douglas M. Kellner, Ph.D. (George F. Kneller Professor of Education and Philosophy)

Reynaldo F. Macias, Ph.D.

Teresa L. McCarty, Ph.D. (George F. Kneller Professor of Education and Anthropology)

Patricia M. McDonough, Ph.D.

Peter L. McLaren, Ph.D.

Marjorie Faulstich Orellana, Ph.D.

Robert A. Rhoods, Ph.D.

Linda J. Sax, Ph.D.

Michael H. Setzer, Ph.D.

Daniel G. Solórzano, Ph.D.

Carola E. Suárez-Orozco, Ph.D.

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Daniel G. Solórzano, Ph.D.

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Marcelo M. Suárez-Orozco, Ph.D.

Carlos A. Torres, Ph.D.

Noreen M. Webb, Ph.D.

**Professors Emeriti**

Marvin C. Alkin, Ed.D.

Alexander W. Astin, Ph.D. (Allan Murray Cartter Professor Emeritus of Higher Education)

Nicholas G. Blurton Jones, Ph.D.

Eva L. Baker, Ed.D.

Gordon L. Berry, Ed.D.

Nicholas G. Blurton Jones, Ph.D.

James S. Catterall, Ph.D.

Arthur M. Cohen, Ph.D.

Donald A. Erickson, Ph.D.

Frederick D. Erickson, Ph.D. (George F. Kneller Professor Emeritus of Education and Anthropology)

Norma D. Feshbach, Ph.D.

Patricia C. Gándara, Ph.D.
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, 30 hours; laboratory, eight hours. Introduction to range of critical concepts in humanities, social sciences, and hard sciences. Use of multicultural texts that represent variety of genres and disciplines to develop critical reading and writing skills. Development of scientific inquiry skills relevant to study of mathematics and science in medical professions. Weekly compositions, critical thinking journals, and participation in laboratory experiments. Application of these concepts to critical issues facing migrant farmworker communities and similar groups throughout state and country, with focus on issues such as identity, language, culture, and central social, health, and educational issues facing Latino community. Offered in summer only. P/NP or letter grading.

80. Understanding Collegiate Experience. (4) Lecture, three hours; discussion, 90 minutes. Designed to help students better understand their 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.

92A. Study of Teaching and Learning Methods. (4) Seminar, three hours. Analysis of teaching theory and teaching methods in light of research on student characteristics, learning environments, student/instructor interaction, and outcomes of instruction. Application of theory and research to practice. Letter grading.

92B. Practicum in Higher Education. (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 presentation. P/NP or letter grading.

92E. Evaluation of Peer Mentoring. (4) Seminar, three hours. Requisite: course 92D. Third course in series of three designed to provide proficiency 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 adjustments to college experience, both academic and social. Letter grading.

Education

Education Studies Minor

The Education Studies minor is intended to allow the student to (1) pursue careers in education either as teachers or researchers, and (4) prepare for the career perspective. Offered in summer only. P/NP or letter grading.

6. Introduction to Humanities, Social Sciences, and Scientific Inquiry. (4) Lecture, 30 hours; laboratory, eight hours. Introduction to range of critical concepts in humanities, social sciences, and hard sciences. Use of mult-cultural 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 concepts to critical issues facing migrant farmworker communities and similar groups throughout state and country, with focus on issues such as identity, language, culture, and central social, health, and educational issues facing Latino community. Offered in summer only. P/NP or letter grading.

Education

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Education

Education Studies Minor

The Education Studies minor is intended to allow the student to (1) pursue careers in education either as teachers or researchers, and (4) prepare for the career perspective. Offered in summer only. P/NP or letter grading.

6. Introduction to Humanities, Social Sciences, and Scientific Inquiry. (4) Lecture, 30 hours; laboratory, eight hours. Introduction to range of critical concepts in humanities, social sciences, and hard sciences. Use of multigical, 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 into issues central to educational research and practice. Students must follow the program of study in effect at the time of their admission. Students completing their sophomore year are encouraged to apply.

Required Upper Division Courses (32 units minimum): A minimum of four core courses selected from Education M108, 118 through 138, 149, M186, 187, and M194A, M194B, M194C (to be taken concurrently with either M182A, M182B, M182C or M183A, M183B, M183C) and three additional courses selected from the core courses listed above or from 80, 92A through 92F, M102, M103, M112, 140, 141, 142, 143, 144, M145A, M145B, 146A, 146B, 147, M148, 162, CM178/CM178L, 185, 191A through 191X, 192A/170A, 192B/170B, 196C.

One only course from Education 80 and 92A through 92F may be applied toward the elective requirement. Courses CM178/CM178L, 192A/170A, and 192B/170B must be taken concurrently.

A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor.

Each minor course must be taken for a letter grade. Successful completion of the minor is indicated on the transcript and diploma.

Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website, http://grad.ucla.edu/gasaac/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).

Education

Graduate 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 le-
98. Critical Issues in Education. (4) Seminar, 30 minutes; laboratory, 30 minutes. Introduction to critical educational issues and approaches taken by researchers, policymakers, and education advocates as they respond to these issues. Laboratory portion of course engages students in small research groups where they acquire background on particular issue of interest, learn about social sciences research, and conduct mini-research projects. May be repeated for credit. Letter grading.

Upper Division Courses


M103. 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 educational experiences. Letter grading.

M104. Introduction to Arts Education: Theory and Practice. (4) (Same as Arts and Architecture M102.) Seminar, three hours; site and peer school visits, three hours; outside experience. 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 arts education 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, dance, music, theater, and visual arts. P/NP or letter grading.

M108. Sociology of Education. (5) Same as Sociology M175.) Lecture, four hours; discussion, one hour. Study of how U.S. educational system both promotes socioeconomic opportunities and maintains socioeconomic inequalities: historical and theoretical perspectives on role of education in U.S. society; trends in educational attainment; ways in which family background, class, race, and gender affect educational achievement and attainment; stratification between and within schools; effects of education on socioeconomic attainment; studies of student participation; educational policies to improve school quality and address socioeconomic inequalities. 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.


121. Introduction to K-12 Issues in American Public Education. (5) Seminar, four hours. Examination of K-12 issues and American policy toward education through discussion of various school and social policies that impact on children and adolescents. Systematic examination of major participants in American schooling process (parents, students, teachers, geographical space of schools, environment, school organization, and society) and how they are associated with American schooling experience. Discussion of contemporary themes, such as risk behaviors, school control, how school exit examinations, social promotion, technology in classroom, psychosocial 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 role 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 policy issues underlying diverse system of higher education. Letter grading.

123. Teaching Profession. (5) Seminar, four hours. Exploration of traditional and alternative teaching practices and public responses to teachers and students learning in over the past three decades, with an emphasis on the socio-economic context and discussion of some philosophical questions that challenge teaching profession. Letter grading.

124. 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 C209A. Letter grading.

125. Politics of Education. (5) Lecture, two hours; discussion, two hours. Political dimensions of education institutions as organizations. Relationships between education institutions and political institutions in society. Political theory as foundation for public policy analysis; interest groups in education policy formation and implementation; and focus on Freirean pedagogy. Concurrently scheduled with course C207. P/NP or letter grading.

126. Educational Anthropology. (5) Seminar, four hours. Research seminar designed to familiarize students with the discipline and subject matter of anthropological research in educational settings. Is-
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 achievement, learning and behavior, with specific emphasis on educational issues related to school reform, teenage pregnancy, school violence, teacher burnout, teacher midlife crisis, cultural diversity, information-seeking behaviors, and academic attainment. Letter grading.

141. Writing to Learn: Teaching Writing in Elementary and Secondary Schools. (4) Seminar, four hours. Ways to teach writing at elementary and secondary levels through examination of related concepts of understanding, evidence, part, and whole, and writing process. Emphasis on how reading, writing, and thinking exercises engage students and lead them to develop their own ideas. Letter grading.

142. Reflections of Education Abroad Program Study. (4) Seminar, two hours; activity, two hours. Designed to provide returned Education Abroad Program (EAP) students with opportunities to deepen their understanding of higher education and school reform, their contact with literature, academic articles, and speakers. Provides EAP reciprocity students with opportunities to analyze their transition to UCLA and allows both groups to reflect on reciprocity students' chances to learn through service to EAP. Letter grading.

143. Understanding Pathways to College. (4) Lecture, two hours; discussion, two hours. Examination of inequality across and beyond higher education to understand how college admissions are stratified across racial and class lines. Roles of school personnel, higher education admissions, families, and students in promoting equal educational opportunity. Course is good preparation for students interested in working in UCLA programs such as Early Academic Outreach Program and UCLA Students in Los Angeles area schools. Letter grading.

144. Advanced Undergraduate Research Seminar. (4) Seminar, four hours. Limited to juniors/seniors. Advanced independent skills course of joint interest to professor and student. Research topics deal with K-12 American educational experience, with specific emphasis on diversity, assessment, technology, at-risk, geographical space, and psychosocial development of children. Letter grading.

145A. Violence: Understanding, Using, and Resolving Conflict. (4-4) (Same as Chicano and Chicano Studies M174A-M174B.) Lecture, one hour; discussion, three hours. Course M145A is enforced requisite to course M145B. Designed for students who wish to learn principles of dialogue and mediation, as alternatives to violence, and practice how to apply them in educational settings. (In Progress) (M145A) and letter (M145B) grading.

145C. Alternatives to Violence; Peer Mediation in Public Schools. (4) (Same as Chicano 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 UCLA students. 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 thinking, review of literature from conflict resolution theory, reflection on student field experiences to deepen understanding of violence, its causes, and what schools can do to mitigate it. Letter grading.

146A. Research Apprenticeship in Peer Counseling. (4) Seminar, four hours. Limited to juniors/seniors. Highly interactive, student-centered course designed to provide hands-on experience in academic peer advising and leadership 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. Enforced requisite: course 147A. Limited to 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.

148. Women in Higher Education. (4) (Same as Gender Studies M148A.) Seminar, three hours. Designed for juniors/seniors. Overview of issues related to women's experiences in higher education. Topics include curricular transformation, feminist pedagogy, gender equity, women faculty members, and intersection of gender and race. Letter grading.

149. Innovative Entrepreneurship in Education. (5) Lecture, two hours; laboratory, two hours. Exploration of various types 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 contributions of student development theory. General overview of various student affairs functions and programs, along with key theories that inform practice. P/NP grading.

151. Student Development in Theory and Practice: Strategic Career Decision Making. (2) Seminar, two hours. Importance of making informed career decisions and understanding how cultural and family values play role in career development process. Through interactive lessons and projects, development of strategies to anticipate and effectively deal with lifelong challenges such as work/life balance, career fulfilment, and other academic concerns. Letter grading.

152. Theory and Practice of Intergroup Dialogue: Building Facilitation Skills. (4) Seminar, four hours. Topics include social psychology of intergroup relations, intercultural and dialogic communication theories and strategies to anticipate and effectively deal with intragroup dialogues in multicultural settings. While providing foundational grounding in theory and pedagogy of intergroup dialogue, particular attention to relationships between intergroup dynamics, structural inequalities, systems of privilege and oppression, and mental health outcomes and disparities among populations. Concurrently scheduled with course C244. Letter grading.

162. 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 and accountability, 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 P192A. Training and supervised practicum for undergraduate students interested in raising their academic achievement and that of high school and middle school students. Letter grading.

170B. Experiential Learning: America Reads. (2) Fieldwork, four hours. Enforced corequisite: course 170A. Training and supervised practicum for undergraduate students, including tutoring and mentoring of K-3 students at America Reads sites. Letter grading.

CM176. Critical Media Literacy and Politics of Gender: Theory and Production. (4) (Same as Gender Studies C176.) Seminar, three hours. Enforced requisite: course CM176L. Use of range of pedagogical approaches to theory and practice of critical media literacy that necessarily involve understanding of new technologies and media forms. Study of both theory and production techniques to inform student analysis of media and critical media literacy projects. Concurrently scheduled with course CM278L. Letter grading.

CM178L. Critical Media Literacy and Politics of Gender: Laboratory. (2) (Same as Gender Studies C178L.) Laboratory, two hours. Corequisite: course CM178. Hands-on production experience as integral component of course CM178. Concurrently scheduled with course CM278L. Letter grading.

M182A. Language, Literacy, and Human Development Ethnography. (2) (Same as Afro-American Studies M182A.) Fieldwork, three hours. Enforced corequisite: course CM194B. 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. (2) (Same as Afro-American Studies M182C.) Fieldwork, three hours. Enforced corequisite: course CM194C. 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 CM194A. 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 CM194B. 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 CM194C. 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 relevance to academic achievement. Involves curricular instructional techniques and training that contribute to tutoring, counseling, and other instructional assistance in various school settings. P/NP or letter grading.
M186. Equal Rights and Unequal Education. (4) (Same as Political Science M183 and Public Policy M186.) Lecture, four hours. Exploration of controv-
ersions between American beliefs about equal opportu-
nity and racial equality and inequalities that exist in public education. Three major topics in education as vehicles for understanding philosophical and em-
pirical concerns surrounding equality in American education and life. Examination of issues from legal, sociological, political, and philosophical perspectives drawn from Martin Luther
King to Ronald Reagan, and legal cases include Plessy versus Ferguson to Brown versus Board of Edu-
cation, as well as cases still pending in courts. Letter grading.

187. Variables in Education. (5) Seminar, four hours. Limited to juniors/seniors. Variables topic course organized around disciplinary knowledge cen-
tral to development of core understandings of educa-
tional and learning processes, phenomenon, policies,
methods, and instruction. Development of culminat-
ing project. Consult Schedule of Classes for topics
and instructors. May be applied as core credit for Ed-
ucation Studies minor students. May be repeated three
times for credit. Letter grading.

M190. Arts Education Undergraduate Practicum: Pre-
paration, Observation, and Practice. (4) (Same as Arts and Architecture M192.) Seminar, three
hours. Enforced requisite: course M104, M190. Limited to juniors/
seniors. Training and supervised practicum for ad-
vanced undergraduate students participating in Visual
and Performing Arts Education minor. Students im-
plement and evaluate original arts education pro-
grams under guidance of faculty members in small
course settings. P/NP or letter grading.

M190LS. Arts Education Undergraduate Practi-
cum and Capstone Project. (4) (Same as Arts and
Architecture M190LS.) Seminar, three hours; practi-
cum, three hours; outside study, six hours. Enforced
requisites; courses M104, M190. Limited to juniors/
seniors. Students continue in and evaluate their edu-
cation training and supervised practicum for advanced undergraduate students participating in Visual and
Performing Arts Education minor. Students continue to implement and evaluate original arts education programs under guidance of faculty members and designated guiding
teachers in K-12 public school settings. May be re-
peated for credit with consent of instructor. P/NP or
letter grading.

191A-191X. Current Issues in Education. (4 each)
Seminar, four hours. Limited to juniors/seniors. Var-
iable topics course organized on selected current is-
sues basis, integrating field observations and read-
ings through social sciences and comparative perspec-
tives. 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
170A. Limited to juniors/seniors. Training and super-
vised practicum for advanced undergraduate stu-
dents to study learning and developmental factors as
well as cultural, social, and environmental factors that
affect student academic achievement. Exploration,
testing, and application of various learning styles that
enable students to become more effective learners.

Letter grading.

192B. Undergraduate Practicum in America
Reads. (2) Seminar, two hours. Enforced corequisite:
course 170B. Limited to juniors/seniors. TB tests
required prior to first day of instruction. Training and super-
vised practicum for advanced undergraduate stu-
dents that provides opportunity to reflect on both context and relevance pertaining to America Reads
sites. Letter grading.

193Y-193Z. High School Advising Program. (4-4)
Discussion, two hours; fieldwork, five hours. Service
learning courses designed to provide students with
information and tools they will need to undertake academic advising in low socioeconomic
high schools. Letter grading.

Graduate Courses

200A. Historical Research and Writing. (4) Lecture,
four hours. Methods of historical research and writing
for students who are or who will be engaged in re-
search and in report or paper or thesis writing, regard-
less of their field of interest. S/U or letter grading.

200B. Survey Research Methods in Education. (4)
Lecture, four hours. Requisite: course 230A. Prob-
lems of conceptualization, organization, and gather-
ing nonexperimental and quasi-experimental quanti-
tative research data. 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 process-
ning and analyzing nonexperimental and quasi-experi-
mental quantitative data. S/U or letter grading.

M201C. History of American Education. (4) (Same
as History M264.) Discussion, three hours. History of
educational thought and of social forces impinging on
American education from 1860s to present. Analysis
of relation between these ideas and forces, and aims
and practices of American education today. S/U or
letter grading.

Prevalent evaluation theories, systems for categoriz-
ing these theories, and process of theory develop-
ment in educational evaluation. S/U or letter grading.

203. Educational Anthropology. (5) Seminar, four
hours. Research seminar designed to familiarize stu-
dents with discipline of anthropology and its role in
anthropology and education. Exploration of concept
of culture through various anthropological perspec-
tives, with focus on theories of culture, cultural trans-
mision 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. Is-
sues of race, gender, sexual orientation, and class,
and consideration of application of anthropological
theory and methods to educational practice and re-
search. Concurrently scheduled with course C126.
Letter grading.

204A. Introduction to Education and Social Sci-
ciences. (4) Lecture, four hours. Interdisciplinary
course intended to introduce students to study of edu-
cational issues, texts, and movements of thought
through social sciences and comparative perspec-
tives. S/U or letter grading.

204B. Introduction to Comparative Education. (4)
Lecture, four hours. Exploration of conceptual and metho-
’dological questions underlying comparative
education. Particular attention to development of field
and to styles of social analysis that may be applied to
comparative and cross-national studies in education.
S/U or letter grading.

204C. Education and National Development. (4)
Lecture, four hours. Designed for graduate students.
Analysis of various social sciences perspectives and
methodologies (including modernization, dependen-
cy, Marxist, neo-Marxist, liberation theology, and
world-system theories of change and development)
and underlying notions of role of education in develop-
ment of less-industrialized countries of world. 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 re-
gard to ethnic, religious, and linguistic minorities
through selected national and international case stud-
ies. Introduction to cross-cultural education in repre-
sentative countries in industrial, political, and
economic systems. S/U or letter grading.

204E. International Efforts in Education. (4) Le-
cture, four hours. Designed for graduate students. Cri-
tical analysis of complex world of “development coopera-
tion,” with particular reference to bilateral and mul-
tilateral efforts in education. S/U or letter grading.

304 / Education
204F. Nonformal Education in Comparative Perspective. (4) Lecture, four hours. Comparative and international perspectives on nonformal, educational 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, experimentation, evaluation, and future of computer systems in education, with emphasis on computer-assisted instruction (CAI), and use of computers to teach programming and to foster development of writing, computational, and filing skills. S/U or letter grading.

206A. Philosophy of Education: Introduction. (4) Lecture, four hours. Systematic introduction to field, indicating ways in which philosophy serves to elucidate educational aims, content, methods, and values. S/U or letter grading.

206C. Introduction to Conceptual Analysis. (4) Lecture, four hours. Conceptual analysis of recurrent and contemporary themes in field. Emphasis on development of logical and linguistic skills used in analysis of educational problems and issues. S/U or letter grading.

C207. Politics of Education. (5) Lecture, two hours; discussion, two hours. Political dimensions of education institutions as organizations. Relationships between educational institutions and political processes in society. Political theory as foundation for public policy analysis; interest groups in education policy formation and implementation; and focus on Freirean pedagogy. Concurrently scheduled with course C125. S/U or letter grading.

208A. Perspectives on Sociology of Education. (4) Lecture, four hours. Sociological perspectives on current issues in educational policy and practice, including differential opportunity, equality of educational opportunity, structure of educational organization, teacher/student relationships, reform in education at elementary, secondary, postsecondary levels. S/U or letter grading.

208B. (Im)migrant Youth, Ethnography, and Education. (4) Seminar, four hours. Exploration of experiences of immigrant youth in U.S. schools, with focus on language, culture, and educational equity in urban settings. Letter grading.

208C. Explanation in Social Sciences and Educational Research. (4) Lecture, two hours; discussion, two hours. Designed for graduate students. Overview of basic principles of explanation related to inquiry in education from vantage point of various social and behavioral sciences disciplines. S/U or letter grading.

C209A. History of Higher Education. (5) Seminar, four hours. Exploration of major eras in history of higher education. Topics include issues concerning access, diversity, parental choice, cultural literacy, teacher empowerment, and role of popular media. Concurrently scheduled with course C124. S/U or letter grading.

209C. Research and Evaluation in Higher Education. (4) Lecture, four hours. Development of conceptual and practical understanding of research and evaluation in higher education. Topics include basic statistics, survey design, data analysis, assessment issues, and research proposal writing. Letter grading.

209D. System of Higher Education. (4) Lecture, four hours. Analysis of structure and function of American postsecondary education 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 methods in educational research through theories 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 255A, Psychology 255B. Review of stan- dardized tests, multiple group models, multiple group models and models with co-variates, item and person parameter estimation, differential item functioning analysis, testing model fit, linking and scale alignment, computerized adaptive testing. S/U or letter grading.

212A. Learning and Education. (4) Lecture, four hours. Models of learning, modeling, reinforcement, motivation, encoding, memory, transfer, individual differ- ences, and developmental issues in learning. S/U or letter grading.


213C. Group Counseling Theory and Process. (4) Lecture, three hours; discussion, one hour. Requisite: course 214A. Group productivity, leadership in groups, social perception, attitude formation, and ef- fect of behavior changes in individuals and groups. Evaluation of social, psychological, and educational principles related to therapeutic experiences of indi- viduals in small groups. Letter grading.

213D. Assessment in Counseling and Student Af- fairs. (4) Lecture, four hours. Overview of assessment issues and methods used in counseling and student affairs activities. Emphasis on concepts of testing and measurement, applications of measurement theory, and contemporary issues that are significant in influ- encing assessment in student affairs programs. Letter grading.

214A. Counseling Theory and Practice. (4) Lec- ture, four hours. Alternatives in counseling practice in relation to theories of personality development and functioning, research on effectiveness of counseling, professional standards of care, and ethical and legal aspects of counseling. S/U or letter grading.

214C. American Professoriate: Faculty Status, Role, and Performance. (4) Discussion, four hours. Historical and contemporary issues involving Ameri- can professoriate. Topics include employment, aca- demic culture, teaching and research, reward struc- ture, faculty development. Letter grading.


214F. Student Problems: Social Context. (4) Lec- ture, four hours. Focus on students in un- standing configuration of social forces that lead to student dysfunctions. Consideration of number of contemporary social problems that are of concern to school counselors: for example, problematic and behav- ioral scientists. S/U or letter grading.

215S. Personality, Motivation, and Attribution. (4) Same as Psychology M239.) Lecture, four hours. Consider current research and theory relating personality vari- ables (e.g., attributional styles, self-esteem) to motiva- tional concerns such as persistence and intensity of behavior. Perceived causes of outcomes in achieve- ment and affiliative domains. S/U or letter grading.


217A. Social Development and Education. (4) For- merly numbered M217A.) Seminar, four hours. Biolog- ical and familial, school, and other influences on chil- dren; development in context; current research and theoretical models; consideration of theoretical and methodological research on family, peer group, and school; application of developmental theory and re- search to educational practice. S/U or letter grading.

217B. Cognitive Development and Education. (4) Lecture, two hours; discussion, two hours. Designed for graduate students. Critical review of theories and research in cognitive development, with focus on work of Piaget and Vygotsky, and relation of this work to issues in educational practice. S/U or letter grading.

M217C. Personality Development and Education. (4) (Same as Psychology M245.) Lecture, four hours. Review of research and theory of critical content ar- eas in personality development that bear on school performance: achievement motivation, self-concept, aggression, sex differences, empathy, and other so- cial behaviors; recent status of emotional behavior in personality theory and development. S/U or letter grading.

217D. Language Development and Education. (4) Lecture, four hours. Discussion, one hour. Requisite: course M217E. Introduction to phonological, phonetic, and phonetic analysis in speech and writing. S/U or letter grading.

M217F. Adolescent Development. (4) (Same as Psy- chology M242G.) Seminar, four hours. Designed for graduate students. Review of recent research on physical, cognitive, social, and psychological develop- ment during secondary school years. Topics include physical development, changes in parent/adolescent relationships, role of peers, identity development, high-risk behaviors, stress 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 intelligence; elements of validity and reliability. S/U or letter grading.

219. Laboratory: Advanced Topics in Research Methodology. (4) Laboratory, four hours. Provides assistance in design of research and interpretation of data to advanced students from other divisions. Cov- erage of special topics not included in other courses on research methods. S/U or letter grading.


239. Organization and Governance of Educational Systems. (4) Lecture, four hours. Academic organiza-
tions, government, and other postsecondary, are most ac-
propriately studied as complex, professionalized or-
ganizations. Emphasis on characteristics of educa-
tional institutions and systems as organizations: 
environmental relations, governance structures, pro-
cesses, and patterns of decision making and policy-
making. S/U or letter grading.

240. Cultural Foundations of U.S. Education: Pol-
cy and Practice. (4) Lecture, four hours. Designed for 
graduate students. Cultural foundations of persistent 
and troubling issues and tensions in American educa-
tional policymaking and practice. S/U or letter grad-
ing.

241. Research Methodology in School Administra-
tion. (4) Seminar, four hours. Examination of research 
problems and strategies in school administration. S/U 
or letter grading.

242. Quantitative Foundations for Educational Pol-
icy and Planning. (4) Lecture, four hours. Introductory 
research course with focus on quantitative founda-
tions for descriptive, tactical, and strategic policy 
analysis in education. S/U or letter grading.

(4) Lecture, four hours. Preparatory to the research 
courses. Fundamental issues surrounding use of 
methods in social sciences, including issues in 
philosophy of social sciences, relationship between 
theory and method, empirical status of constructs, 
cognition and social research, sources of evidence 
in ethnography, research and social policy. Letter 
grading.

C244. Theory and Practice of Intergroup Dialogue: 
Building Facilitation Skills. (4) Seminar, four hours. 
Topics include social psychology of intergroup rela-
tions, intercultural and dialogic communication theo-
ries, methods for reconciling and bridging differences in 
schools and communities, research and evaluation of 
intergroup dialogues and other educational meth-
ods for improving intergroup relations, and core com-
petencies for planning, delivering, and evaluating 
intergroup dialogues in multicultural settings. While 
providing foundational grounding in theory and 
pedagogy of intergroup dialogue, particular attention 
to relationships between intergroup dynamics, struc-
tural inequalities, systems of privilege and oppres-
sion, and mental health outcomes and disparities 
among populations. Concurrently scheduled with 
course C160. Letter grading.

245. Seminar: Cost-Benefit Analysis in Education. 
(4) Seminar, four hours. Conceptual and theoretical 
underpinnings of cost-benefit analysis, critical analy-
sis of current cost-benefit studies, and procedures for 
conduct of cost-benefit studies. S/U or letter grading.

246A. Seminar: Advanced Computer Software for 
Educational Policy and Planning. (4) Seminar, four 
hours. Requisite: course 246B. Description: use of 
various software applications. Letter grading.

246B. Economics of Urban Schooling. (4) Lecture, 
two hours; discussion, two hours. Examination of 
principles and tools of policy analysis and their appli-
cation to enhance urban schooling decision making 
and effectiveness. Use of economics and equity as 
underlying and resulting from major research on 
non- 
socialists. S/U or letter grading.

250A. Fundamentals of U.S. Higher Education Sys-
tem. (4) Lecture, four hours. Designed for graduate 
students. Two-course sequence designed to orient 
new students to issues, ideas, and literature that con-
stitute this division, with emphasis on underlying so-
cial and political issues that shape higher education 
and organizational change. Letter grading.

250B. Organization and Analysis of Higher Educa-
tion. (4) Lecture, four hours. Designed for graduate 
students. Two-course sequence designed to orient 
new students to issues, ideas, and literature that con-
stitute this division, with emphasis on underlying so-
cial and political issues that shape higher education 
and organizational change. Letter grading.

250C. Theoretical Frameworks of Higher Educa-
tion. (4) Lecture, four hours. Designed for graduate 
students. Two-course sequence designed to orient 
new students to issues, ideas, and literature that con-
stitute this division, with emphasis on underlying so-
cial and political issues that shape higher education 
and organizational change. Letter grading.

251A. Seminar: Philosophy of Education, Episte-
ology. (4) Seminar, four hours. Analysis of episte-
malological alternatives to empiricism and their rele-
vance to educational research, planning, and prac-
tice. S/U or letter grading.

251C. Seminar: Philosophy of Education, Social 
Science Problems—Methodological Perspectives. 
(4) Seminar, four hours. Requisite: course 206C. S/U 
or letter grading.

251E. Seminar: Philosophy of Education, Selected 
Issues. (4) Seminar, four hours. S/U or letter grading.

252A. Seminar: Educational Organizations. 
(4) Seminar, four hours. Requisite: course 208A. S/U 
or letter grading.

252B. Educational Enterprise. (4) Lecture, two hours; 
discussion, two hours. Requisite: course 252A. Limit-
ed to Educational Leadership Program students. Use 
of structural, human resource, political, and symbolic 
frames to study K-16 education, with focus on educa-
tional environments, organizations, and curriculum 
and instruction. Letter grading.

M253A. Seminar: Current Problems in Compara-
tive Education. (4) Seminar, four hours. Examination of 
some of most influential critical theorists, including Marx, Ni-
etzsche, Freud, Marcuse, Foucault, Fanon, and de 
Beauvoir and their contributions to critique of con-
temporary education, society, and politics. S/U or let-
ter grading.

M253B. Seminar: African Education. (4) Seminar, 
four hours. Designed for graduate students. Contempo-
rary 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 educa-
tion. S/U or letter grading.

M253C. Seminar: Asian Education. (4) Seminar, 
four hours. 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 ex-
amined through writings of Marx, Lenin, Mao, and 
others. Implementation of this theory in specific case 
studies, along with comparative assessments of non-
socialist nations. S/U or letter grading.

253G. Seminar: Asian Americans and Education. 
(4) Seminar, four hours. Topics include historical and 
social issues 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/Hispanic and Educa-
tion. (4) Seminar, four hours. Basic issues and topics 
related to Chicano/Hispanic students in higher ed-
ucation. Review of literature on specific educational 
levels and Chicano/Hispanic student progress (e.g., 
early childhood, elementary, higher education; specif-
ically: assessment, access, tracking, segregation; implications for schooling). S/U or letter grading.

253L. 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-
flecting social, political, and economic changes in 
countries of Middle East and Islamic world (including 
Pacific Rim, South and Central Asia). S/U or letter grading.

254. Seminar: History of Education. (4) Seminar, 
four hours. Requisite: course M201C. Study of current 
movements in historiography of education and critical 
reading of texts in history of education. S/U or letter 
grading.

(4-4-4) Seminar, four hours. May be repeated for 
credit. S/U or letter grading. 255A. Measurement; 255B. 
Des- 
design; 255C. Data Analysis.

256A. Seminar: Special Topics in School Learning. 
(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 Psychology. 
(4) Seminar, four hours. In-depth analysis of selected 
research approaches/areas in counseling psychology. 
S/U or letter grading.

258A. Seminar: Problems in Instructional 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 stu-
dent characteristics. Emphasis on differential impact 
of higher education on student and faculty develop-
ment. S/U or letter grading.

260. Seminar: Principles of Curriculum and In-
struction. (4) Seminar, four hours. 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-
ramics have transformed the institutions it was once 
shaped by institutions of higher education, with focus 
specifically on student experiences, curricula, institu-
tional climate, educational policies, and administrative 
practices.

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 
principles and tools of policy analysis and their appli-
cation to enhance urban schooling decision making 
and effectiveness. Use of economics and equity as 
underlying and resulting from major research on non-
socialist nations. S/U or letter grading.

263G. Seminar: Asian Americans and Education. 
(4) Seminar, four hours. Topics include historical and 
social issues 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.
porting contrasting views of policy issues, contention and counter-contention construction and support, and methodological strategies. Students explore the use of various strategies to understand and to develop the skills required to understand and to develop the skills required to understand the complexities of environmental issues. The course also includes discussions of the environmental impacts of climate change and the role of human activities in contributing to these impacts.

273A. Structure and Dynamics of Educational Systems. (4) Course, two hours; discussion, two hours. Overview of school administration, teaching, curriculum, and policy studies. Focus on American education as an institutional system wherein federal, state, and local policy, school administration, curriculum theory, and design, and teaching are inextricably connected in delivery of educational services.

273B. Social Foundations of Education. (4) Seminar, four hours. Introduction to literature on multiculturalism and its applications in diverse social, cultural, and educational contexts. Exploration of multiculturalism and reassertion for democratic citizenship by review of diverse number of anthropological, sociological, educational curricula and literatures.

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 theory of knowledge and how to do maximally objective research emerging from these literatures.

275. Race and Education. (4) Seminar, four hours. Design for graduate students. Exploration of role of race in educational policymaking. Exploration of broad interpretation of how schools contribute to racial stratification and inequality by linking sociological and sociopsychological theories of race, racial attitudes, and conflict to historical policy analysis.

276. Contemporary Theories of Writing. (4) Lecture, four hours. Review of current theories of writing and literary research and examination of relationships among writing and literacy, culture, and human development. In particular, examination of history of writing research over last three decades as part of broader intellectual history. Letter grading.


278. Critical Media Literacy and Politics of Gender. Laboratory, four hours. Corequisites: course CM278L. Use 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, analysis of studies in media and critical media literacy projects. Concurrently scheduled with course CM178L. Letter grading.

279. History of Urban Schooling. (4) Lecture, four hours. Design for graduate students. Survey of major events, political and economic forces, and ideas that shaped urban schools since 1890. Examination of historical scholarship across range of political/ideological perspectives. Letter grading.

280A. Seminar: Selected Topics in Special Education, (2 to 6) Seminar, two to six hours. Focus on research and clinical problems in special education. Introduction to range of clinical assessment and remediation strategies. Exploration of current topics in field. S/U or letter grading.

280B. Seminar: Exceptional Individuals. (4) Seminar, four hours. Limited to doctoral students. S/U or letter grading.

281. College Access Seminar. (4) Seminar, two hours; discussion, two hours. Knowledge of changing dynamics of college access at individual, organizational, and field levels and understanding of links between K-12 and postsecondary stratification and how education-related disadvantage accumulates throughout education and affects equity in college access. Letter grading.


283. Social Research in Multicultural and Postcolonial World. (4) Lecture, four hours. Philosophy of social sciences that focuses 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 themes, issues, and methodologies within what has come to be known as critical and cultural studies, including some major theoretical writings in liberal, neo-Marxist, left liberal/postmodernist, and Marxist subfields of critical education tradition. Letter grading.

285. Culture, Brain, and Development. (2) (Same as Anthropology M293, Applied Linguistics M232, 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. Letter grading.

286. Culture, Brain, and Development. (4) (Same as Anthropology M293S, Applied Linguistics M233, Neuroscience M294, and Psychology M247.) Seminar, four 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.

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, ideology, language policies, and multilingualism. Letter grading.

288. Research Apprenticeship Course. (2) Discussed, two hours. Course facilitates mentorship model of education. Open to N.D. students in focus on the development of graduate student research topics. Assignment of common readings related to these topics; students have opportunity to offer and receive feedback. May be repeated for credit. S/U grading.

289A-M289B. Immigration, Racial Change, and Education in 21st-Century Metropolis. (4-4) (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 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 external forces of intergenerational mobility. In Progress (M289A) and Letter (M289B) grading.
290. Educational Policy Analysis: Research, Theo-ry, and Practice. (4) Seminar, four hours. Broad over- view of educational policy analysis and its role in the process to present. Examination of current issues and debates within educational policy in U.S. through different theo-retical lenses. Exploration of major bodies of re-search on educational policy and alternative para-digms. Letter grading.

291. Organizational and Leadership Theory in Edu-ca tion. (4) Lecture, four hours. Introduction to con-temporary and historical conceptions of organization and leadership in context of formal schooling. Explo-ration of these conceptions through inquiry into school and college settings. Letter grading.


293. Teaching Studies: Research into Practice. Three hours. Exploration of hisorical, theoretical, and empirical perspectives related to teaching and teacher education, providing gradu-ate students with broad overview of relevant literature and helping them shape teaching profession in U.S. Letter grading.

M294A-M294B. High School Reform: Persisting Failure, Urgent Challenges. (1 to 8 each) Formerly numbered M243B. (Same as Literature M243A-M243B.) Seminar, four hours. Course M294A is en-forced requisite to M294B. Research seminars with focus on what is probably most serious and neglected problems in educational reform. In past half-century real progress has been made in preschool, gains in achievement in early grades have been pro-duced, and very well-regarded system of higher edu-ca tion has been established — but reform of high school has failed. Exploration of institutional and pol-icy roots of these problems and assessment of available research on key dimensions to help students launch research in one’s related area. Presentations by experts actively involved in high school reform efforts included. In Progress (M294A) and S/U or letter (M294B) grading.

295. Freire. (4) Seminar, four hours. Requisite: course C125 or C207 or prior knowledge of Freire’s work. Analysis of intellectual production of Paulo Freire linked to social context in which it took place. Study of his life and work in five phases: Brazilian Experience; Life in the Brazilian Experience; and the published Education as Practice of Freedom and Pedagogy of Oppressed, as well as other lesser-known works, while also devoting most of this period to empirical research in literacy training (1950 to 1969); his work at Harvard, and then World Council of Churches in Geneva (1970 to 1980), including his consulting with postcolonial revolutionary govern-ments in Africa; his return to Brazil and his work as Secretary of Education in São Paulo (1989 to 1999); and his global travels from 1980 until his death in 1997. Focus on work left incomplete before his death (including socio-pedagogy and citizen’s schools), and by implication his analyses, critiques, and impact in world, his methodology of generative work, and comparisons with other theoretical referents. Letter grading.

296A-296F. Seminars: Research Topics in Educa-tion. (2 each) Seminar, three hours. Advanced study and analysis of current topics in education, Discus-sion 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. (2) 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 issues as they apply to school organizations. Letter grading.

M297. Interdisciplinary Relationship Science. (4) (Same as Anthropology M295S, Psychology M236, and Sociology M269B-M269C.) Lecture, six to 12 hours. Interdisciplinary study of relationships between undergraduates, diverse approaches to relationship science in fields of anthropology, education, psychology, and sociology. Focus on theme of un-derstanding biological, behavioral, and cultural aspects of relationships through diverse theories and method-odological approaches. Use of broad definition of in-terpersonal relationships, including relationships such as parent-child, teacher-student, sibling, peer, kin, ro-mantic relationships, marriages, and friendships. S/U or letter grading.

M298A-M298B-M298C. Relationship Science Fo-rums. (2-2-2) (Same as Anthropology M298A, Psychology M237A-M237B-M237C, and Sociology M269A-M269B-M269C.) Seminar, 90 minutes. Limited to graduate students. Current re-search and theory about personal relationships pre-sented by members of seminar, faculty members, and guest speakers from diverse fields, including anthro-pology, education, psychology, and sociology. May be repeated for credit. S/U grading.

299A-299B-299C. Research Practicum: Educa-tion. (4) to 8 hours. Limited to graduate students. May be repeated for credit. S/U or letter grading.

300. Dissertation Writing Workshop: Interdivisional Seminar. (4) Seminar, one hour; discussion, two hours; laboratory, two hours. Introduce doctoral candidates to dissertation writing as genre that can be analyzed or broken down with its constituent parts and, vice versa, which is construct-ed out of materials that can be identified and ana-lyzed. 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 instruction on introducing computer 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), hu-man sexuality, nutrition, community health resources, and analysis of state’s health framework. S/U grading.

309. Methodologies for English Language Learn-ers. (3) Lecture, three hours. Methods and strategies for teaching English language learners. Discussion of competencies need-ed by all content area teachers of English language, including strategies for teaching in and through En-glish. Topics include selection, implementation, organization-al approaches, and communicative approach; strate-gies and activities. Letter grading.

310. Professional Communication for Graduate Students in Education. (2) Lecture, two hours. Writ-ing workshop on students’ papers in progress to en-sure professional standards. Analysis and group dis-cussion of rhetorical and stylistic principles. May be repeated once. S/U grading.

311. Principles and Methods of Computer Literacy and Classroom Application — K-12. (2) Lecture, one hour; laboratory, 30 minutes. Introduction to use of computers in educational environment. Discussion of issues of computer and software matters into curriculum and hands-on practice that allows stu-dents 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 ele-mentary students. Examination of how children learn to read, write, and use language. S/U grading.


318A. Integrated Methods for Elementary Teach-ers. (4) Lecture, three hours. Course covers the de velopment of instructional programs and analyses and practices of instructional methods for teaching K-6 content, and emphasis on interdisciplinary approach that integrates content areas, aligned with California state frameworks and California content standards for grades K-12 that address needs and interests of di verse students. S/U grading.

318B. Integrated Methods for Elementary Teach-ers. (4) Lecture, four hours. Examination and develop-ment of instructional programs and analyses and practices of instructional methods for teaching K-6 content, and emphasis on interdisciplinary approach that integrates content areas and infuses literacy, technology, and strategies for second language learners. Aligned with California state frameworks and Cal-ifornia content standards for grades K-12, including English language development courses — all of which address needs and interests of diverse students. S/U grading.

318C. Integrated Methods for Elementary Teach-ers. (3) Lecture, three hours. Examination and develop-ment of instructional programs and analyses and practices of instructional methods for teaching K-6 content, and emphasis on interdisciplinary approach that integrates content areas and infuses literacy, technology, and strategies for second language learners. Aligned with California state frameworks and Cal-ifornia content standards. S/U grading.


320A-320B-320C. Secondary Content and Literacy Methods, (3-3-3) Lecture, one hour; discussion, one hour; fieldwork, one hour. Examination and develop-ment of instructional programs and analyses and practices of instructional methods for teaching con-tent in grades 7-12. Emphasis on interdisciplinary ap-proach that integrates content areas and infuses litera-cy, technology, and strategies for second language learners. Methods courses are aligned with California state frameworks and California content standards for grades 7-12, including English language development courses — all of which address needs and various interests of diverse students. S/U grading.

327. Principles and Methods for Teaching Spanish Effectively. (2 to 6) Lecture, two to six hours. Empha-sis on proficiency-based foreign language teaching methods incorporating language assessment skills,
modeling, hands-on experiences, and development of teaching and teacher-training materials. S/U grading.

328. Principles and Methods for Teaching Mandari

329. Language Structure, Acquisition, and Devel

301. Structure and Functions of Schools as Com

302. Principles and Methods for Teaching Manda

303. Observation and Participation. (2 to 6) Ste

304. Teaching: Principles and Problems. (4) Lec

305. Curriculum Principles and Practices. (4) Lec

306. Social Foundations and Cultural Diversity in

307. Teaching Apprentice Practicum. (1 to 4) Se

308. Seminar. Three hours. Analysis of basic prin

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311. Procedural Issues in Evaluation. (4) Lecture

312. Language and Culture. (2) Lecture. Two hou

313. Language and Culture. (3) Lecture. Three hou

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330. Classroom Residency and Teaching. (4) Site-

331. Methodology for Primary Language Instruc

332. Language and Culture. (2) Lecture. Two hour

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400. Foundations of Education Policy Analysis. (4

401. Structure and Functions of Schools as Com

402. Principles and Methods for Teaching Mandarin

403. S/U grading.
ministration, specific programs, and contemporary issues and trends in college student counseling. Offered in summer only. Letter grading.

414D. Career Development and Interventions in Colleges. (4) Lecture, two hours; discussion, one hour; laboratory, one hour. Examination of challenges faced by college students of all ages in preparing for careers in dynamic, multicultural world economy and interventions for assisting them. Emphasis on understanding development and evaluation of interventions. Letter grading.

414E. Administration of Student Affairs. (3) Lecture, two hours; discussion, two hours. Overview of general knowledge and processes essential to effectively administer programs or services under student affairs. Examination of relationship between environmental factors and strategies for governing, planning, and managing student affairs programs and services. Offered in summer only. Letter grading.


415B. Advanced Assessment in Counseling Psychology. (4) Lecture, four hours. Requisite: course 415A. Advanced course in assessment for counseling psychologists. Survey and demonstration of instruments of achievement, affective, and personality appraisal, with emphasis on testing and interplay between assessment and psychological functioning for reducing risks of failure in academic, personal, and social areas. S/U or letter grading.

416. Program Development and Planning in Student Affairs. (4) Lecture, two hours; discussion, two hours. Planning of programs that provide or support learning for individuals and groups in student affairs context. Examination of philosophical foundations of program planning, along with pedagogical and logistical dimensions of program development. Letter grading.

417. Program Evaluation and Assessment in Student Affairs. (4) Lecture, two hours; discussion, two hours. Overview of education and program evaluation in context of student affairs and higher education. Examination of usefulness and appropriateness of various program evaluation methodologies and theories of assessment practice. Letter grading.

418. Group Dynamics in Student Affairs. (3) Lecture, two hours; discussion, two hours. Group productivity, leadership in groups, social perception, attitude development, and behavioral changes in individuals and groups. Evaluation of social, psychological, and educational principles related to experiences of individuals in small groups. Letter grading.

419. Introduction to Research in Student Affairs. (4) Lecture, two hours; discussion, two hours. Designed to orient students to nature of educational research in context of student affairs. Overview of qualitative and quantitative research methods and processes students as scholar-practitioners. Exposure to these methods supplemented by examination of how they are used in published research relevant to practice of student affairs. Letter grading.


421A. Programs and Research in Early Childhood Education. (4) Lecture, four hours. Preparation: one course from development series. Examination of child care programs and research in early childhood education, including review of relation of research in developmental psychology and education to goals of early childhood education and day care. S/U or letter grading.

421D. Parents and Community Agents in Child Development. (4) Lecture, four hours. Preparation: one course from development series. Critical review of theoretical basis and effectiveness of training programs for parents of young and elementary school-aged children; relation of preschool parent programs to family development and role of programs in community. S/U or letter grading.


422. Inquiry into Schooling: Basic Issues. (4) Lecture, four hours. Critical examination of basic issues and problems in organization and reconstruction of preschool and primary schooling. Consideration of historical development and changing functions of schooling in American society; school organization; schooling alternatives; problems in management of educational change. S/U or letter grading.


424A. Social Studies in Curriculum. (4) Lecture, four hours. Advanced study in social studies curriculum 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 instructional programs. 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 educational programs. Philosophical basis for bilingual programs; theories of learning and instruction applied to bilingual learner; language assessment; development of instructional component; pedagogy. S/U or letter grading.


426A-426B. Program Development and Program Evaluation in Student Affairs. (2-2) Lecture, two hours. Introduction to program development and planning, as well as to assessment and program review. Development of knowledge of and skill in planning educational and training programs that provide support for selected student affairs functions. As well as knowledge of and skill in developing, implementing, and analyzing assessment projects within student affairs context. Study of basic theoretical perspectives underlying program design/implementation and program review/assessment and application by developing, implementing, and assessing effectiveness of one program. In Progress (426A) and letter (426B) grading.

431A. Administration in Higher Education. (4) Lecture, four hours. Overview of college and university administration and introduction to policy research and analysis in postsecondary institutions. Case studies of administrative processes, and practices. Management information systems, resource allocation, and issues related to responsibility, authority, and participation in administrative decisions. 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 how theories of learning guide design and enactment 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 application, 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 programs in society and their solution through curriculum policy and practice; instructional design and operation; in-service training of teaching staffs. S/U or letter grading.

441A. Instructional Supervision A. (4) Lecture, four hours. Analysis of teaching-substantiated elements of instruction: task analysis, appropriate objectives, principles that increase motivation, rate and degree of learning, retention and transfer, monitoring and adjusting instruction to meet needs and capacities of learners. S/U or letter grading.


442B. Legal Aspects of Educational Management and Practice. (4) Lecture, four hours. Examination of structures and kinds of law governing educational systems in U.S.; constitutional dimensions of church/state relations; employees' civil rights and legal aspects of hiring, firing, and negotiating procedures; student attendance, control, and civil rights. S/U or letter grading.

443. Policy Analysis in Education. (4) Lecture, four hours. Overview of political, economic, and legal context of educational policy formation. Included in examination is issues that impact on minorities (e.g., bilingual education, 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 443B. 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 problems of urban school leadership. Emphasis on changing nature of urban principalship, with considerable attention to role of other school and community agencies that interact with urban school leaders. S/U or letter grading.

448B. Urban Leadership Laboratory. (4) Laboratory, four hours. Analysis of and opportunity to practice human and technical skills requisite for success as urban school leader. Topics include negotiations, conflict resolution, applied computer technology, and ef-
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 ca- pacities. Letter grading.


452A-452B. Educational Enterprise. (4-4) Lecture, two hours; discussion, two hours. Limited to Educa- tional Leadership Program students. Use of structur- al, 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 curricu- lum and instruction.

453. Technologically Educated: Learning and Lead- ing with Technology. (2) Lecture, two hours; discus- sion, two hours. Limited to Educational Leadership Program students. Examination of roles of technology in educational environments, organizations, and leadership issues asso- ciated 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 students hone and assess their collabora- tion abilities. Exploration of qualitative and quantita- tive 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 Leader- ship 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) Lecture/workshop, eight hours per month; discussion, one hour; laboratory, one hour. Limited to doctoral students in Educational Leadership. Emphasis on writing and professional development as writers, addressing style and organization, scholarly genres, modes of dis- course, and broader issues of conceptualization and method. Letter grading.

456. Altering Structure and Culture of Schooling. (4) Lecture, four hours; discussion, four hours. Limit- ed to Educational Leadership Program students. Us- ing applied orientation, examination of variety of ap- proaches to organizational change and ways to sus- tain change. Letter grading.

457. Student Development across K-16 Spectrum. (4) Discussion, four hours. Limited to Educational Leadership Program students. Theories of student development applicable to K-12 and postsecondary education. Focus on educational influences on self and others. Letter grading.


460. Seminar: Special Issues in Evaluation. (2 or 4) Seminar, one or two hours; discussion, one or two hours. Topics and instructors vary each term. Recent emphasis includes evaluation utilization and cost-effec- 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.

466. Critical Media Literacy: Teaching Youth to Critically Read and Create Media. (4) Lecture, four hours. Preparation for educators to teach K-12 stu- dents to explore their relationships with media by crit- ically questioning media representations and creating their own alternative media messages. Critical media literacy combines theoretical foundations of cultural studies and critical pedagogy with practical class- room applications of new digital media as well as tra- ditional print-based means of communication. Explora- tion of media representations of race, class, gender, sexual orientation, and other identity markers. Educa- tors critically question media and technology, as well as explore new alternatives for creating multimedia messages. 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 com- prehensive specialized use of appropriate computer- based technology in the teaching-learning process, and debriefing of field experiences integrat- ing technology-related tools. Letter grading.

482B. Instructional Strategies in Urban Education: English Language Learners. (4) Lecture, four hours. Emphasis on instructional practices that support En- glish 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, com- prehension, 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 populations in urban public schools. Continuation of study of delivery of comprehensive instruction, instruction, and assessment issues related to teaching students with disabilities, students who are at risk, and stu- dents who are gifted and talented. Research opportu- nities, additional methods in content areas for ad- vanced study, and preparation of M.Ed. inquiry in- cluded. Letter grading.

482D. Instructional Strategies in Urban Education: Visual and Performing Arts. (4) Lecture, two hours; discussion, two hours. Emphasis on instructional practices that integrate visual and performing arts into urban classrooms. Debriefing of field experiences im- plementing subject-centered arts instruction, instruc- tion connecting arts and disciplines, and instruction con- necting arts and other core disciplines. Advanced ex- ploration of elements of each art form, as well as content and emotional scaffolding strategies and re- fection on strategies that are student-accessible, en- gaging, and relevant. Letter grading.

485. Advanced Study of Health Education. (1) Lec- ture, four hours. Student meetings with instructors, field specialists, and team cohorts to study and ana- lyze delivery of content, development of physical, cognitive, emotional, and social well-being of stu- dents in K-12 classrooms. Topics include prevention and intervention strategies, accessing local and com- munity resources, curriculum and instruction, and major state and federal laws related to student health and safety. Letter grading.

489. Instructional Strategies in Education. (4) Lec- ture, four hours. Methods for academic instruction, in- cluding research and active participation in adversary approach, forms of debate, role playing, interaction process analysis, and feedback on instruments. Practical emphasis on social sciences and humanities instruc- tion, 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, proce- dures, and constraints of each strategy considered in terms of learner and task variables. Laboratory expe- riences in classroom settings permit students system- atically to apply and evaluate alternative instructional strategies. S/U or letter grading.


495A-495B-495C. Resident Seminars. (4-4-4) Sem- inar, two hours; site-based fieldwork, two hours. Stu- dents meet in individual sessions with instructors and other field support faculty and in team and cluster co- horts for university-school partnership, in addition to regular seminars to debrief field experiences and con- tinue study of curriculum, instruction, and assess- ment issues. Research opportunities, 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. May be repeated for credit. S/U or letter grading.

499A-499B-499C. Advanced Directed Field Experi- ence. (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 adviser and graduate dean, and host university 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 Ex- aminations 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.


599. Dissertation Research. (4 to 12) Tutorial, to be arranged (four hours for every 4 units). Research for and preparation of doctoral dissertation. May be re- peated for credit. S/U grading.
**Electrical Engineering**

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

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Pham Bhabuta, Ph.D., Vice Chair, Graduate Affairs  
Oscar M. Stafsudd, Jr., Ph.D., Vice Chair, Undergraduate Affairs  
Jason C.S. Woo, Ph.D., Vice Chair, Industry Relations  

**Professors**

Asad A. Abidi, Ph.D.,
Abeer A.H. Alwan, Ph.D.,
Katsushi Arisaka, Ph.D.,
M.-C. Frank Chang, Ph.D. (Wente Endowed Professor of Electrical Engineering)
Panagiotis D. Christofides, Ph.D.,
Jingsheng (Jason) Cong, Ph.D.,
Babak Daneshrad, Ph.D.,
Suhans N. Diggavi, Ph.D.,
Deborah L. Estrin, Ph.D. (Jonathan B. Postel Professor of Networking),
Warren S. Grundfest, M.D., FACS,
Mark H. Hansen, Ph.D.,
Lei He, Ph.D.,
Diana L. Hufferaker, Ph.D.,
Tatsuo Itoh, Ph.D. (Northrop Grumman Professor of Electrical Engineering),
Bahram Jalali, Ph.D. (Northrop Grumman Opto-Electronic Professor of Electrical Engineering),
Chandrashekar J. Joshi, Ph.D.,
William J. Kaiser, Ph.D.,
Ala J. Laib, Ph.D.,
Kuo-Nan Liou, Ph.D.,
Jia-Ming Liu, Ph.D.,
Warren B. Mori, Ph.D.,
Stanley J. Osher, Ph.D.,
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Gregory J. Pottie, Ph.D.,
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Behzad Razavi, Ph.D.,
Vvani P. Roychowdhury, Ph.D.,
Izhak Rubin, Ph.D.,
Henry Samueli, Ph.D.,
Majid Sarrafzadeh, Ph.D.,
Ali H. Sayed, Ph.D.,
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Jason L. Speyer, Ph.D.,
Mani B. Srivastava, Ph.D.,
Oscar M. Stafsudd, Jr., Ph.D.,
Dwight C. Strel, Ph.D.,
Pablo Tabuada, Ph.D.,
King-Ning Tu, Ph.D.,
Lieve Vandenberghe, Ph.D.,
Mihaela van der Schaar, Ph.D.,
John D. Villasenor, Ph.D.,
Kang L. Wang, Ph.D. (Raytheon Company Professor of Electrical Engineering),
Richard D. Wesel, Ph.D.,
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C.-K. Ken Yang, Ph.D.,
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**Professors Emeriti**

Frederick G. Allen, Ph.D.,
A.V. Balakrishnan, Ph.D.,
Francis F. Chen, Ph.D.,
Harold R. Fetverman, Ph.D.,
Stephen E. Jacobsen, Ph.D.,
Rajeev Jain, Ph.D.,
Nhan N. Levan, Ph.D.,
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Frederick W. Schott, Ph.D.,
Gabor C. Temes, Ph.D.,
Chand R. Viswanathan, Ph.D.,
Paul K.C. Wang, Ph.D.,
Donald M. Wilberg, Ph.D.,
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**Associate Professors**

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Christina Fragouli, Ph.D.,
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Dejan Markovic, Ph.D.,
Aydogan Ozcan, Ph.D.,
Sudhakar Pamarti, Ph.D.,
Yuanjunw Ethen Wang, Ph.D.,

**Assistant Professors**

Daniela Cadirc, Ph.D.,
Robert N. Candler, Ph.D.,
Lara Dolecek, Ph.D.,
Benjamin S. Williams, Ph.D.,

**Adjunct Professors**

Ezio Biglieri, Ph.D.,
Darushi Divaldar, Ph.D.,
Mary M. Eashaghian-Winer, Ph.D.,
Michael P. Fitz, Ph.D.,
Keisuke Goda, Ph.D.,
Asad M. Madir, Ph.D.,
Ingrid M. Verbaaehede, Ph.D.,
El Yiyanobovitch, Ph.D.,
Jin-Hyung Lee, Ph.D.,

**Adjunct Assistant Professor**

**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 program is accredited by the Engineering Accreditation Commission of ABET. See http://www.abet.org.

The Electrical Engineering major is a designated capstone major. Undergraduate students complete a design course in which they integrate their knowledge of the discipline and engage in creative design within realistic and professional constraints. Students apply their knowledge and expertise gained in previous mathematics, science, and engineering coursework. Within a multidisciplinary team structure, students identify, formulate, and solve engineering problems and present their projects to the class.

**Electrical Engineering 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 2, 3, 10, M16 (or Computer Science M51A); Mathematics 31A, 31B, 32A, 32B, 33A, 33B; Physics 1A, 1B, 1C, 4AL, 4BL.

**The Major**

**Required:** Electrical Engineering 101A, 101B, 102, 103, 110, 110L, 113, 115A, 115AL, 121B, 131A, 132A, 141, 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 one of the following pathways:
Antennas and Microwave: Three major field elective courses — Electrical Engineering 162A, 163A, 163C; one capstone design course from 164D or 184DA/184DB (count as one course); and one laboratory course — 164L (by petition from 194 or 199).

Integrated Circuits: Three major field elective courses from Electrical Engineering 115B, 115C, and 132B or 163A; one capstone design course from 115D or 184DA/184DB (count as one course); and one laboratory course — 115BL (by petition from 194 or 199).

Microelectromechanical (MEMS) Systems: Three major field elective courses from Electrical Engineering 115B or 123A, 128 or 163A, and CM150; one capstone design course — 129D; and one laboratory course from 122L or CM150L (by petition from 194 or 199).

Photonics and Plasma Electronics: Three major field elective courses from Electrical Engineering 170A, 170B, and 174 or M185; one capstone design course — 173D; and one laboratory course — 170L (by petition from 194 or 199).

Signals and Systems: Three major field elective courses from Electrical Engineering 114, 115B, 131B, 132B, 136, 142, 162A; one capstone design course from 113D, 173D, 180D, 181D, or 184DA/184DB (count as one course); and one laboratory course from 115BL or M116L or M171L (by petition from 194 or 199).

Solid State: Three major field elective courses — Electrical Engineering 123A, 123B, 128; one capstone design course — 129D; and one laboratory course — 122L (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 2, 3, 10, M16 (or Computer Science M51A); Life Sciences 2, 3, 23L; Mathematics 31A, 31B, 32A, 32B, 33A, 33B; Physics 1A, 1B, 1C, 4AL, 4BL.
The Major
Required: Electrical Engineering 101A, 102, 103, 110, 110L, 113, 115A, 115AL, 131A, 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 Computer Science 111, M117 (or Electrical Engineering 132A), and 131 or 132 or 180; one capstone design course from Electrical Engineering 113D, 180D, 181D, or 184DA/184DB (count as one course); and one laboratory course — Electrical Engineering M116L (by petition from 194 or 199).

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://grad.ucla.edu/gasaa/library/pgmprqintro.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 Electrical Engineering offers Master of Science (M.S.) and Doctor of Philosophy (Ph.D.) degrees in Electrical Engineering.

Electrical Engineering
Lower Division Courses
2. Physics for Electrical Engineers. (4) Lecture, four hours; discussion, two hours; outside study, six hours. Requisite: Physics 1C. Introduction to concepts of modern physics necessary to understand solid-state devices, including elementary quantum theory, Fermi energies, and concepts of electrons in solids. Discussion of electrical properties of semiconductors leading to operation of junction devices. Letter grading.

3. Introduction to Electrical Engineering. (3) Lecture, two hours; laboratory, two hours; outside study, five hours. Introduction to field of electrical engineering: research and applications across several areas, such as communications, control, electromagnetics, embedded computing, computer optimization, integrated circuits, MEMS, nanotechnology, photonics and optoelectronics, plasma electronics, signal processing, and solid-state electronics. Letter grading.


Upper Division Courses
100. Electrical and Electronic Circuits. (4) Lecture, four hours; discussion, four hours; outside study, four hours. Requisites: Mathematics 33A, 33B, Physics 1C. Electrical quantities, linear circuit elements, circuit principles, signal waveforms, transient and steady state circuit behavior, semiconductor diodes and transistors, small signal models, and operational amplifiers. Letter grading.

101A. Engineering Electromagnetics. (4) Formerly numbered 101.) Lecture, four hours; discussion, one hour; outside study, seven hours. Requisites: Mathematics 33A and 33B, or 33A and 33B. Physics 1C. Electromagnetic field concepts, waves and phasors, transmission lines and Smith chart, transient responses, vector analysis, introduction to Maxwell equations, static and quasi-static electric and magnetic fields. Letter grading.

101B. Electromagnetic Waves. (4) Formerly numbered 161.) Lecture, four hours; discussion, one hour; outside study, seven hours. Enforced requisite: course 101A. Time-varying fields and Maxwell equations, plane wave propagation and interaction with media, energy flow and Poynting vector, guided waves in waveguides, phase and group velocity, radiation and antennas. Letter grading.

102. Systems and Signals. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Requisite: Mathematics 33A. Corequisite: Mathematical Methods for Linear Systems I and II (Formerly numbered 161.) Lecture, four hours; discussion, two hours; laboratory, two hours; outside study, seven hours. Enforced requisite: course 101A. Introduction to linear systems, analysis and design of linear time-invariant systems. Linear time-invariant systems, system modeling, response functions, superposition and convolution integrals, Laplace transforms and system functions. Fourier series and transforms. Frequency responses, responses of system to periodic signals. Sampling theorem. 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 power, network functions, poles and zeros, frequency response, mutual inductance, ideal transformer, application of Laplace transforms to circuit analysis. Letter grading.

314 / Electrical Engineering
110L. Circuit Measurements Laboratory. (2) Laboratory, four hours; outside study, two hours. Requisite: course 115A, Computer Science 561A. Introduction to circuits containing resistors, capacitors, inductors, and op-amps. Ohm’s law and current and voltage division, Thieve- nin and Norton equivalent circuits, superposition, transient and steady state analysis, and frequency response. Letter grading.


113D. Digital Signal Processing Design. (4) Lecture, two hours; laboratory, four hours; outside study, six hours. Enforced requisite: course 113. Real-time implementation of digital signal processing algorithms on digital processor chips. Experiments involving A/D and D/A conversion, aliasing, digital filtering, sinusoidal oscillators, Fourier transforms, and finite word-length effects. Course project involving original design and implementation of signal processing systems for voice communications, speech, audio, or video using DSP chip. Letter grading.

114. Speech and Image Processing Systems Design. (4) Lecture, three hours; discussion, one hour; laboratory, four hours; outside study, six hours. Enforced requisite: course 113. Design principles of speech and image processing systems. Speech production, analysis, and modeling in first half of course; design techniques for image enhancement, filtering, and detection in second half. Lectures supplemented by laboratory implementation of speech and image processing tasks. Letter grading.

115A. Analog Electronic Circuits I. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Enforced requisite: course 110L, 115A. Experimental determination of device characteristics, resistive diode circuits, single-stage amplifiers, compound transistor stages, operation of single-stage amplifiers, operational amplifiers, and operational amplifier circuits. Introduction to hands-on design experience based on individual student hardware design and implementation. Letter grading.


115B. Analog Electronics Laboratory II. (4) Laboratory, four hours; outside study, eight hours. Enforced requisite: course 115B. Recommended corequisite: course 115D. Study of high-frequency effects in digital systems. Design of op-amp circuits, simple active filters, active-RC filters, and active-RL filters. Letter grading.

115C. Digital Electronic Circuits. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Enforced requisite: course 115A, Computer Science 561A. Recommended: course 115B. Transistor-level digital circuit analysis and design. Modern logic families (static CMOS, pass-transistor, dynamic logic), integrated circuit (IC) layout, digital circuits (logic gates, flip-flops/latches, counters, etc.), computer-aided simulation of digital circuits. Letter grading.

115D. Design Studies in Electronic Circuits. (4) Lecture, four hours; discussion, four hours; outside study, eight hours. Enforced requisite: course 115B. Applications of distributed circuits. Operational amplifier applications and limitations. Power amplifier design. Feedback and stability. Precision analog circuits. Analysis and design of operational amplifiers. Noise in electronic circuits and transistors. Performance of analog amplifiers, effective mass, Bohr magneton, and spin, as well as theoretical approaches. From these nanoscale components, discussion of basic behaviors of nanosystems such as analysis of dynamics, variability, and noise, contrasted with those of scaled CMOS. Incorporation of design project in which students are challenged to design electronic nanosystems. Letter grading.

120D. Semiconductor Processing and Device Design. (4) Lecture, two hours; laboratory, four hours; outside study, six hours. Enforced requisite: course 121B. Introduction to CAD tools used in integrated circuit processing and device design. Device structure optimization tool is based on PISCES; process integration tool is based on SUPREM. Course familiarizes students with those tools. Using CAD tools, MOS process integration to be designed. Letter grading.

131A. Probability. (4) Lecture, four hours; discussion, one hour; outside study, 10 hours. Requisites: course 110L, 115A. Study of basic concepts of probability, including random variables and vectors, distributions and densities, moments, characteristic functions, and limit theorems. Applications to communication, control, and signal processing. Introduction to computer simulation and analysis of stochastic processes. Letter grading.

132B. Data Communications and Telecommunication Networks. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Enforced requisite: course 131A. Introduction to concepts of stochastic processes, emphasizing continuous- and discrete-time stationary processes, correlation function and spectral density, linear transformation, and mean-square estimation. Applications to communication, control, and signal processing. Introduction to computer simulation and analysis of stochastic processes. Letter grading.


141. Principles of Feedback Control. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Enforced requisite: course 2. Introduction to linear systems, control system design using state-space and frequency domain methods. Lab work using MATLAB software. Letter grading.

146. Principles of Nanoelectronics. (4) Lecture, four hours; discussion, four hours; outside study, four hours. Requisite: Physics 1C. Introduction to fundamentals of nanoscience for electronics nanosystems. Physical and device design problems in electronic charge, frequency, and noise, contrasted with those of scaled CMOS. Incorporation of design project in which students are challenged to design electronic nanosystems. Letter grading.

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142. Linear Systems: State-Space Approach. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Enforced requisite: 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 Microelectromechanical Systems (MEMS). (4) Same as Bioengineering CM150L and Mechanical and Aerospace Engineering CM180L. Lecture, four hours; discussion, one hour; outside study, seven hours. Requisites: Chemistry 20A, 20L, Physics 1A, 1B, 1C, 4AL, 4BL. 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 CM250A. Letter grading.

150DL. Photic Sensor Design Laboratory. (4) Lecture, four hours; discussion, four hours; outside study, eight hours. Limited to seniors. Multidisciplinary course with lectures and laboratory experiments on design and fabrication of intensity and interference-based transducers, photometers, multiplexing and sensor networks, physical and biological medical sensors. Design and implementation of optical gyroscopes, computer interfacing, and signal processing. Letter grading.

CM150L. Introduction to Micromachining and Microelectromechanical Systems (MEMS) Laboratory. (2) Same as Bioengineering CM150L and Mechanical and Aerospace Engineering CM180L. Lecture, one hour; laboratory, four hours; outside study, one hour. Requisites: course CM150, Chemistry 20A, 20L, Physics 1A, 1B, 1C, 4AL, 4BL. Hands-on introduction to microfabrication technology 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 design microfabrication processes capable of achieving desired MEMS device. Concurrently scheduled with course CM250L. Letter grading.

162A. Wireless Communication Links and Antennas. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Enforced requisite: course 101B. Basic properties of transmitting and receiving antennas and antenna arrays. Array synthesis. Adaptive array antennas. Beamforming, null steering, and array antenna beam shape. Cell-site and mobile antennas, bandwidth budget. Noise in communication systems (transmission lines, antennas, atmospheric, etc.). Cell-site and mobile antennas, cell coverage for signal and traffic interference, multipath fading, ray bending, and other propagation phenomena. Letter grading.

163A. Introductory Microwave Circuits. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Enforced requisite: course 101B. Transmission lines description of waveguides, impedance matching techniques, power dividers, directional couplers, active devices, transistor amplifier design. Letter grading.

163C. Introduction to Microwave Systems. (4) Lecture, four hours; outside study, eight hours. Enforced requisite: course 101B. Theory and design of modern microwave systems such as satellite communication systems, radar systems, wireless sensors, and biological applications of microwaves. Letter grading.

164D. Microwave Wireless Design. (4) Lecture, one hour; laboratory, four hours; outside study, seven hours. Enforced requisite: course 101B. Microwave wireless 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) Lecture, one hour; laboratory, three hours; outside study, three hours. Enforced requisite: course 101B. Measurement techniques and instrumentation for active and passive microwave components; cavity resonators, waveguides, waveguides, slotted lines, directional couplers. Design, fabrication, and characterization of microwave circuits in microstrip and coaxial systems. Letter grading.

170A. Principles of Photonics. (4) Lecture, four hours; recitation, one hour; outside study, seven hours. Enforced requisite: courses 2, 101A. Development of solid foundation on essential principles of photonics from ground up with minimum prior knowledge on this subject. Topics include optical properties of materials, optical wave propagation and modes, optical interferometers and resonators, optical coupling and modulation, optical absorption and emission, principles of lasers and light-emitting diodes, and optical detection. Letter grading.

170B. Photonic Devices and Circuits. (4) Lecture, four hours; recitation, one hour; outside study, seven hours. Enforced requisite: course 101A. Introduction to micromachining technologies and microelectromechanical systems (MEMS). Topics include optical waveguides, optical fibers, optical couplers, optical modulators, lasers and light-emitting diodes, and typical photodiodes. Letter grading.

170C. Photonic Sensors and Solar Cells. (4) Lecture, four hours; recitation, one hour; outside study, seven hours. Enforced requisite or corequisite: course 101. Properties of lasers, including saturation, gain, mode structure. Laser applications, including optics, modulation, communication, holography, and interferometry. Letter grading.

M171L. Data Communication Systems Laboratory. (2 to 4) (Same as Computer Science M171L) Laboratory, four hours; outside study, four to eight hours. Recommended preparation: course M111L. Limited to seniors. Not open to students with credit for course M117. Interpretation of analog-signaling aspects of digital systems and communication through experiments 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, modem and terminal characteristics, and interfaces. Letter grading.

173D. Photonics and Communication Design. (4) Lecture, one hour; laboratory, three hours; outside study, eight hours. Enforced requisite: course 101. Recommended preparation: course 101A. Introduction to measurement of basic photonic devices, including LEDs, lasers, detectors, and amplifiers; fiber-optic fundamentals and measurement of fiber systems. Modulation of optical systems and associated communication links. Computer-aided design through experiments, using contemporary test instruments to generate and display signals in relevant laboratory setups. Letter grading.

174. Semiconductor Optoelectronics. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Enforced requisite: course 170A. Introduction to semiconductor optoelectronic devices for optical communications, interconnected systems, and signal processing. Basic optical electronics, photodiodes, avalanche photodiode detectors (APD), light-emitting diodes (LED), semiconductor lasers, optical modulators and amplifiers, and typical photonic systems. Letter grading.

176. Photonics in Biomedical Applications. (4) Lecture, three hours; discussion, one hour; outside study, eight hours. Enforced requisite: course 101. Study of different types of optical systems and their physical behavior. Examination of how these systems project their value onto the body and the potential for projected biomedical applications. Specific capabilities of photonics to be related to each example. Letter grading.

180D. Systems Design. (4) Lecture, two hours; laboratory, four hours; outside study, six hours. Enforced requisite: course M16, M110L, or Computer Science M152A. Computer Science 35L. Design of systems that combine embedded hardware, software, memory and interface circuits. Fundamental algorithms for sensing and control to expose students to basic concepts in robotics and current state of art. Letter closely tied to design laboratories and students work in teams of five on projects related to systems design and to systems design and operation. Letter grading.

184DA-184DB. Independent Group Project Design. (2-2) (Formerly numbered 184D.) Laboratory, five hours; discussion, one hour. Enforced requisite: courses M16, 110L, 110L. Course 184DA is enforced requisite to 184DB. Course focuses on group project that runs year long to give students intensive experience on hardware design, microcontroller programming, and project coordination. Several projects based on autonomous robots that traverse small mazes and courses offered yearly and target regional competitions. Students produce designs that are evaluated and approved by faculty members. Topics include sensing circuits and amplifier-based design, microcontroller programming, in Progress (184DA) and letter (184DB) grading.

M185. Introduction to Plasma Electronics. (4) (Same as Physics M122.) Lecture, three hours; discussion, one hour; outside study, eight hours. Enforced requisite: course 101A or Physics 110A. Senior-level introductory course on fundamentals of ionized gases and applications to materials processing, generation of coherent radiation and particle beams, and renewable energy systems. Letter grading.

188. Special Courses in Electrical Engineering. (4) Seminar, four hours; outside study, eight hours. Special topics in electrical engineering for undergraduate students taught on experimental or temporary basis, such as those taught by resident and visiting faculty members. May be repeated once for credit with topic or instructor change. Letter grading.

194. Research Group Seminars: Electrical Engineering. (2 to 4) Seminar, four hours; outside study, eight hours. Enforced requisite: credit for research group. Students who are part of research group. Discussion of research methods and current literature in field. May be repeated for credit. Letter grade only. Students must submit proposal to school of engineering for approval. Individual contract required; enrollment petitions available in Office of Academic and Student Affairs. Letter grading.

Graduate Courses

201A. VLSI Design Automation. (4) Lecture, four hours; outside study, eight hours. Enforced requisite: course 115C. Fundamentals of design automation of VLSI circuits and systems, including introduction to circuit
and system platforms such as field programmable gate arrays and multicores; high-level synthesis, logic synthesis, and technology mapping; physical design; and testing and verification. Letter grading.

201C. Modeling of VLSI Circuits and Systems. (4) Lecture, four hours. Requisite: course 115C. Detailed study of system-level modeling of digital integrated circuits and systems. Topics include power and energy consumption in computing and communication at various scales ranging across embedded mobile, personal, enterprise, and data-center scale; computing, sensing, and control technologies and algorithms for improving energy sustainability in human-physical systems. Topics include energy-efficient consumption, sources, and energy storage; dynamic power management; power-performance scaling and energy proportionality; duty-cycling; power-aware scheduling; low-power protocols; battery modeling and management; thermal management; sensing of power consumption. Letter grading.

202C. Networked Embedded Systems Design. (4) Lecture, four hours; laboratory, four hours; outside study, eight hours. Preparation: course 213B. Explore design for graduate computer science and electrical engineering students. Training in combination of networked embedded systems design combining embedded hardware platform, embedded mobile, personal, enterprise, and data-center scale; computing, sensing, and control technologies and algorithms for improving energy sustainability in human-physical systems. Topics include energy-efficient consumption, sources, and energy storage; dynamic power management; power-performance scaling and energy proportionality; duty-cycling; power-aware scheduling; low-power protocols; battery modeling and management; thermal management; sensing of power consumption. Letter grading.

205A. Matrix Analysis for Scientists and Engineers. (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 disciplines. Covers matrix algebra and linear algebra, language in which virtually all of modern science and engineering is conducted. Review of matrices taught in undergraduate courses and introduction to graduate-level text. Letter grading.


208C. Topics in Functional Analysis for Applied Mathematics and Engineering. (4) Same as Mathematics 268B.B. Lecture, four hours; outside study, eight hours. Topics in one or more aspects of circuit and systems, such as digital, analog, mixed-signal, and radio frequency integrated circuits (RF ICs); digital electronic design automation; wireless communication circuits and systems; embedded processor architectures; embedded software; distributed sensor and actuator networks; robotics; and embedded security. May be repeated for credit with topic change. S/U or letter grading.

208S. Seminar: Circuits and Embedded Systems. (2 to 4) Seminar, two to four hours; outside study, four to eight hours. Seminars and discussions on 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 (RF ICs); digital electronic design automation; wireless communication circuits and systems; embedded processor architectures; embedded software; distributed sensor and actuator networks; robotics; and embedded security. May be repeated for credit with topic change. S/U grading.


212B. Multirate Systems and Filter Banks. (4) Lecture, three hours; outside study, nine hours. Requisite: course 212A. Fundamentals of multirate systems; polyphase representation; multistage implementations; applications of multirate systems; maximally decimated filter banks; perfect reconstruction systems; paralytic filters. Computer software for transform and its relation 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 techniques; architectures for digital signal processing circuits; integrated circuit modules for digital signal processing; programmable signal processors; CAD tools and cell libraries for application-specific integrated circuit design; case studies of speech and image processing circuits. Letter grading.


214B. Advanced Topics in Speech Processing. (4) Lecture, three hours; computer assignments, two hours; outside study, seven hours. Requisite: course M214A. Advanced techniques used in various speech-processing applications, with focus on speech recognition by human and machine. Speech recognition and synthesis: acoustic-phonological and psychoacoustics of human perception. Dynamic Time Warping (DTW) and Hidden Markov Models (HMM) for automatic speech recognition systems, pattern classification, and search algorithms. Aids for hearing impaired. Letter grading.

215A. Analog Integrated Circuit Design. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Requisite: course 115B. Design and development of analog integrated circuits; bipolar and MOS device structures and models, single-stage and differential amplifier, noise, feedback, operational amplifiers, offset and distortion, sampling devices and circuits in monolithic CMOS and bipolar. Letter grading.


216A. 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 implementation in VLSI technologies. Basic circuit concepts, communications background, transceiver architectures, low-noise amplifiers and mixers, oscillators, frequency synthesizers, power amplifiers. Letter grading.


215E. Signaling and Synchronization. (4) Lecture, four hours; outside study, eight hours. Requisites: courses 215A, 2156A. Design and analysis of circuits for synchronization and communication for VLSI systems.
tems. Use of both digital and analog design tech-
niques to improve data rate of electronics between
functional or processing systems. Advanced clocking
methodologies, phase-locked loop design for
clock generation, and high-performance wire-line
transmitters, receivers, and timing recovery circuits.
Letter grading.

M216A. 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 M51A, and 115A. Recommended:
course 115C. LSI/VLSI design and application in
computer systems. Fundamental design techniques
that can be used to implement complex integrated
systems on chips. Letter grading.

216B. VLSI Signal Processing. (4) Lecture, four
hours; outside study, eight hours. Advanced concepts
in VLSI signal processing, with emphasis on architec-
ture design and optimization within block-oriented de-
scription that can be mapped to hardware. Funda-
mental concepts from digital signal processing (DSP)
theory, architecture, and circuit design applied to
complex DSP algorithms in emerging applications for
personal communications and healthcare. Letter grading.

M216C. LSI in Computer System Design. (4)
(Same as Computer Science M258C.) Lecture, four
hours; laboratory, four hours; outside study, four
hours. Requisite: course M216A. LSI/VLSI design and
application in computer systems. In-depth studies of VLSI
architectures and VLSI design tools. Letter grading.

M217. Biomedical Imaging. (4) (Same as Bioengi-
eering M217.) Lecture, four hours; outside study,
nine hours. Requisite: course 114 or 211A. Optical
imaging modalities in biomedicine. Other nonoptical
imaging modalities discussed briefly for comparison
purposes. Letter grading.

218. Network Economics and Game Theory. (4)
Lecture, four hours; outside study, eight hours. Dis-
cussion of how different cooperative and noncoopera-
tive games among agents can be constructed to model,
analyze, optimize, and shape emerging inter-
actions among users in different networks and system
settings. How strategic agents can successfully com-
pete with each other for limited and time-varying re-
sources by optimizing their decision process and
learning from their past interaction with other agents.
To determine their optimal actions in these distribut-
ed, informally decentralized environments, agents need
to decide directly via interaction how other agents
interact and respond to their actions. Discussion
in detail of several existing multilateral learning tech-
niques that can be successfully deployed in multina-
ternational systems. Letter grading.

221A. Physics of Semiconductor Devices I. (4)
Lecture, four hours; outside study, eight hours. Physi-
ical principles and design considerations of junction
device. Letter grading.

221B. Physics of Semiconductor Devices II. (4)
Lecture, four hours; outside study, eight hours. Princi-
plies and design considerations of field effect devices
and charge-coupled devices. Letter grading.

221C. Microwave Semiconductor Devices. (4) Le-
cure, four hours; outside study, eight hours. Physical
principles and design considerations of microwave
solid-state devices: Schottky barrier mixer diodes,
IMPATT diodes, transferred electron devices, tunnel
diodes, microwave transistors. Letter grading.

222. Integrated Circuits Fabrication Processes. (4)
Lecture, four hours; outside study, eight hours. Requir-
ige: course 2. Principles of integrated circuits fabrica-
tion processes. Technological limitations of integrated
circuits devices: bulk material and epitaxial growth,
thermodynamic, diffusion, ion-implanta-
tion, chemical vapor deposition, dry etching, lithogra-
y, and metallization. Introduction of advanced pro-
cess simulation tools. Letter grading.

223. Solid-State Electronics I. (4) Lecture, four
hours; outside study, eight hours. Requisites: courses
124, 270. Energy band theory, electronic band struc-
ture of various elementary, compound, and alloy
semiconductors, defects in semiconductors. Recom-
mendations to design, transport properties. Letter
graduating.

225. Physics of Semiconductor Nanostructures
and Devices. (4) Lecture, four hours; outside study,
week. Requisite: course 223. Theoretical meth-
s for calculating electronic and optical properties
of semiconductor structures. Quantum size effects and
low-dimensional systems. Application to semi-
 conductor nanometer scale devices, including nega-
tive resistance diodes, transistors, and detectors. Let-
ter grading.

229. Seminar: Advanced Topics in Solid-State
Electronics. (4) Seminar, four hours; outside study,
week. Requisites: courses 223, 224. Current re-
search areas, such as radiation effects in semicon-
ductor devices, diffusion in semiconductors, optical
and microwave semiconductor devices, nonlinear op-
tics, and electron emission. Letter grading.

229S. Advanced Electrical Engineering Seminar. (2)
Seminar, two hours; outside study, six hours. Pre-
paration: successful completion of Ph.D. major
title 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 topic and research
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. Requir-
ie: course 131A. Applications of estimation and de-
tection concepts in communication and radar engi-
neering; random signal and noise characterizations
by analytical and simulation methods; mean square (MS)
and maximum likelihood (ML) estimations and algo-
rithms; detection under ML, Bayes, and Neyman/
Pearson (NP) criteria; signal-to-noise ratio (SNR) and
error probability evaluations. Letter grading.

230B. Digital Communication Systems. (4) Le-
cure, four hours; outside study, eight hours. Requir-
ie: courses 132A, 230A. Basic concepts of digital
communication systems; representation of bandpass
waveforms; signal space analysis and optimum re-
ceivers in Gaussian noise; comparison of digital mod-
ulation methods; synchronization and adaptive equal-
zation; applications to modern communication sys-
tem. Letter grading.

230C. Algorithms and Processing in Communica-
tion and Radar. (4) Lecture, four hours; outside study,
eight hours. Requisites: courses 132A, 230A. Basic
concepts and implementations of digital signal processing algo-
rithms in communication and radar systems. Opti-
mum dynamic range scaling for random data. Algo-
rithms for discrete convolution and transform, Spectral
estimation algorithms. Parallel processing, VLSI algo-
rithms, and systolic arrays. Letter grading.

230D. Signal Processing in Communications. (4)
Lecture, four hours; outside study, eight hours. Requir-
ie: course 230C. Basic digital signal processing tech-
niques for estimation and detection of signals in
communication and radar systems. Optimization of
dynamic range, quantization, and state constraints;
DFT, convolution, FFT, NTT, Winograd DFT, systolic
array; spectral analysis-windowing, AR, and ARMA
system applications. Letter grading.

231A. Information Theory: Channel and Source
Coding. (4) Lecture, four hours; discussion, one hour;
outside study, seven hours. Requisite: course 131A.
Fundamental limits on compression and transmission of
information. Topics include limits and algorithms for
lossless data compression, channel capacity, rate
versus distortion in source and communication
theory for multiple users. Letter grading.

231E. Channel Coding Theory. (4) Lecture, four
hours; outside study, eight hours. Requisite: course
131A. Fundamentals of communication system
coding algorithms. Topics include block codes, con-
volutional codes, trellis codes, and turbo codes. Let-
ter grading.

232A. Stochastic Modeling with Applications to
Telecommunication Systems. (4) Lecture, four
hours; outside study, seven hours. Requisite: course
131A. Introduction to sto-
chastic processes as applied to study of telecommu-
nication systems and traffic engineering. Renewal
theory; discrete-time Markov chains; continuous-time Markov
processes; networks, and queueing analysis of basic communication system models. Letter grading.

232B. Telecommunication Switching and Queue-
ing Systems. (4) Lecture, four hours; outside study,
week. Requisite: course 232A. Queueing models and
analysis with applications to space-time digital
switching systems and to integrated-service telecom-
munication systems. Fundamentals of traffic engi-
neering and queuing theory. Queue size, waiting
time, busy period, blocking, and stochastic process
analysis for Markovian and non-Markovian models.
Letter grading.

232C. Telecommunication Architecture and Net-
works. (4) Lecture, four hours; outside study, eight
hours. Requisite: course 232B. Analysis and design of
integrated-service telecommunication networks and
multiple-access procedures. Analysis of priority-
based queueing system models. Queueing networks;
protocol architecture; error control, routing, flow, and
access control. Applications to local area, packet-radios, and computer

232D. Telecommunication Networks and Multiple-
Access Communications. (4) Lecture, four hours; outside study, eight hours. Requisite: course 232E.
Performance analysis and design of telecommunications
networks and multiple-access communication systems.
Topics include architectures, multiplexing and multiple-access, message delays, error flow con-
trol, switching, routing, protocols. Applications to lo-
cal-area, packet-radios, local-distribution, computer
and satellite communication networks. Letter grading.

232E. Graphs and Network Flows. (4) Lecture,
outside study, eight hours. Requisite: course 232D.
Introduction to network theory and graph theoretic
methods used in design and analysis of telecommunica-
tion networks and data communication systems. Topics
include routing, power control, switching, and protocols. Applications to lo-
cal-area, packet-radios, local-distribution, computer
and satellite communication networks. Letter grading.

233. Wireless Communications Systems. (4)
Lecture, four hours; outside study, eight hours. Requistie:
course 230B. Various aspects of wireless commu-
nication and medium access for wireless communications
systems. Topics include wireless signal propagation
and channel modeling, single carrier and spread spectrum modulation for wireless systems, and
lower level techniques, multiple-access schemes, controller design and effects of nonideal components, hardware
partitioning issues. Case study highlights system level trade-offs. Letter grading.

235A. Linear Programming. (4) Lecture, four
hours; outside study, eight hours. Requisite: Mathematics
115A or equivalent knowledge of linear algebra. Basic
gradient course in linear optimization. Geometry of
linear programming. Duality, Simplex method, Interior
point methods. Decomposition and large-scale linear
programming. Quadratic programming and comple-
mentary slackness theory. Engineering applications. Introdu-
tion to integer linear programming and computa-
tional complexity theory. Letter grading.

236B. Convex Optimization. (4) Lecture, four
hours; outside study, eight hours. Requisite: course 236A.
Introduction to convex optimization and its applica-
tions. Convex sets, functions, and basics of convex
analysis. Convex optimization problems (linear and
quadratic programming, second-order cone programming, geometric programming). Lagrange dual and
optimality conditions. Applications of convex optimization. Unconstrained minimi-
ization methods. Interior-point and cutting-plane algo-
rithms. Introduction to nonlinear programming. Letter grading.
M237. Dynamic Programming. (Same as Mechanical and Aerospace Engineering M276.) Lecture, four hours; outside study, eight hours. Recommended prerequisite: course 232A or 236A or 238B. Introduction to methods and techniques for decomposing large-scale optimization problems: cutting-plane methods, column generation, decomposition algorithms. Techniques for global continuous optimization: branch-and-bound methods, reverse convex programming, bilinear and biconvex optimization, genetic algorithms, simulated annealing. Introduction to combinatorial optimization. Letter grading.

236. Optimization Methods for Large-Scale Systems. (4) Lecture, four hours; outside study, eight hours. Prerequisites: courses 113, 113A, Key concepts, principles, and algorithms of real-time multimedia communications and processing across heterogeneous Internet and wireless channels. Due to flexible and low-cost bandwidth constraints, networks and communication channels enable variety of delay-sensitive 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.

239AS. Special Topics in Signals and Systems. (4) Lecture, four hours; outside study, eight hours. Requisites: courses 113, 113A. Key concepts, principles, and algorithms of real-time multimedia communications and processing across heterogeneous Internet and wireless channels. Due to flexible and low-cost bandwidth constraints, networks and communication channels enable variety of delay-sensitive 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.

239BS. Seminar: Signals and Systems. (2 to 4 Seminar, two hours; outside study, eight hours. Seminars and discussions on current and advanced topics in one or more aspects of signals and systems, such as communications, control, image processing, information theory, multimedia, computer networking, optimization, speech processing, telecommunications, and VLSI signal processing. May be repeated for credit with topic change. S/U or letter grading.

M240A. Linear Dynamic Systems. (4) (Same as Chemical Engineering M280A and Mechanical and Aerospace Engineering M270A.) Lecture, four hours; outside study, eight hours. Prerequisite: course 141 or Mechanical and Aerospace Engineering 171A. State-space description of linear time-invariant (LTI) and time-varying (LTV) systems in continuous and discrete time. Linear algebra concepts such as eigenvalues and eigenvectors, Jordan form, solution of state equations; stability, controllability, observability, realizability, and minimality. Stabilization design via pole feedback and observers; separation principle. Connections with transfer function techniques. Letter grading.

240B. Linear Optimal Control. (4) Lecture, four hours; outside study, eight hours. Prerequisites: courses 141, 141A, 142A. Introduction to optimal control with emphasis on detailed study of LQR, or linear regulators with quadratic cost criteria. Relationships to classical control system design. Letter grading.

M240C. Optimal Control. (4) (Same as Chemical Engineering M280C and Mechanical and Aerospace Engineering M270C.) Lecture, four hours; outside study, eight hours. Prerequisite: course 240B. Applications of variational methods, Pontryagin maximum principle, Hamilton/Jacobi/Bellman equation (dynamic programming) to optimal control of dynamic systems modeled by nonlinear ordinary differential equations. Letter grading.


241C. Stochastic Control. (4) Lecture, four hours; outside study, eight hours. Prerequisites: courses 240B, 241B. Linear quadratic Gaussian theory of optimal control of linear systems with deterministic state-space models; sigma algebra equivalence and separation principle; dynamic programming; compensator design for time invariant systems; feedback control and servomechanisms, extensions to nonlinear systems; applications to interconnection guidance, gust alleviation. Letter grading.

M242A. Nonlinear Dynamic Systems. (4) (Same as Chemical Engineering M260 and Mechanical and Aerospace Engineering M272A.) Lecture, four hours; outside study, eight hours. Prerequisite: course M240A or Chemical Engineering M280A or Mechanical and Aerospace Engineering M270A. State-space techniques for studying time-invariant and time-varying nonlinear systems with emphasis on stability, Lyapunov theory (including converse theorems), invariance, center manifold theorems, input-to-state stability and small-gain theorem. Letter grading.

243. Robust and Optimal Control by Convex Methods. (4) Lecture, four hours; outside study, eight hours. Prerequisite: course M240A. Multivariable robust control, including H2 and H∞ optimal control and robust performance analysis and synthesis against structured uncertainty. Emphasis on convex methods for analysis and design of control systems; in particular linear matrix inequality (LMI) approach to control. Letter grading.

M248S. 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. Presentations of research topics by leading academic researchers from fields of systems and control. Students who work in these fields present their papers and results. S/U grading.

CM250A. Introduction to Micromachining and Microelectromechanical Systems (MEMS). (4) (Same as Bioengineering CM251B and Chemical and Aerospace Engineering CM280A.) Lecture, four hours; discussion, one hour; outside study, seven hours. Prerequisites: Chemistry 20A, 20L, Physics 1A, 1B, 1C, 4A, 4AL, 4BL. 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 CM150. Letter grading.

CM250B. Microelectromechanical Systems (MEMS) Fabrication. (4) (Same as Bioengineering CM252B and Mechanical and Aerospace Engineering M280B.) Lecture, three hours; discussion, one hour; outside study, eight hours. Prerequisites: course CM150 or CM250A. Advanced discussion of micromachining processes used to construct MEMS. Coverage of many lithographic, deposition, and etching processes, as well as their combination in process integration. Materials issues such as chemical resistance, corrosion, mechanical properties, and residual/intrinsic stress. Letter grading.

CM250L. Introduction to Micromachining and Microelectromechanical Systems (MEMS) Laboratory. (Same as Bioengineering CM251B and Mechanical and Aerospace Engineering CM280L.) Lecture, one hour; laboratory, four hours; outside study, one hour. Prerequisites: course CM250A, Chemistry 20A, 20L, Physics 1A, 1B, 1C, 4A, 4L. Hands-on introduction to micromachining, requirements and micromachining 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) (Same as Bioengineering M252 and Mechanical and Aerospace Engineering M282J.) Lecture, four hours; outside study, eight hours. Prerequisites: courses 236B, 238B. Techniques for membrane design. Design methods, design rules, 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.

M255. Neuroengineering. (4) (Same as Bioengineering M260 and Neuroscience M206.) Lecture, four hours; laboratory, three hours; outside study, five hours. Prerequisites: Mathematics 104B or 68. Introduction to principles and technologies of bio-electricity and neural signal recording, processing, and stimulation. Topics include bioelectricity, electrography, optogenetics, cell and tissue engineering, neural signal processing, bioelectronics, and neural tissue engineering. Letter grading.


M257. Nanoscience and Technology. (4) (Same as Mechanical and Aerospace Engineering M287.) 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-assembled) nanomaterials and nanodevices; nanomaterials, nanoelectronics, and nanobiotechnology. Introduction to new knowledge and techniques in nano areas to understand scientific principles behind nanotechnology and inspire students to create new ideas in multidisciplinary nano areas. Letter grading.

260A. Advanced Engineering Electrodynamics. (4) Lecture, four hours; outside study, eight hours. Prerequisites: courses 161, 162A. Advanced treatment of concepts in electrodynamics and their applications to modern engineering problems. Vector calculus in generalized coordinate system. Solutions of wave equation and Maxwell's equations, transmission, and polarization. Vector potential, duality, reciprocity, and equivalence theorems. Scattering from cylinder, half-plane, wedge, and sphere, including radar cross-section and radar cross-section characterization. Green's functions in electromagnetics and dyadic calculus. Letter grading.


266. Computational Methods for Electromagnetics. (4) Lecture, four hours; outside study, eight hours. Requisites: courses 162A, 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.


274. Fiber Optic System Design. (4) Lecture, three hours; outside study, nine hours. Requisites: courses 173D and/or 174. Top-down introduction to physical level design in fiber 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, quantizer, clock and data recovery, laser driver, and predistortion circuits. Letter grading.

279A. Special Topics in Physical and Wave Electronics. (4) Lecture, four hours; outside study, eight hours. Special topics in one or more aspects of physical and wave electronics, such as electromagnetics, microwaves and millimeter wave circuits, photonics and optoelectronics, plasma electronics, microelectromechanical systems, solid state, and nonotechnology. May be repeated for credit with topic change. S/U or letter grading.

279BS. Seminar: Physical and Wave Electronics. (2 to 4) Seminar, two to four hours; outside study, four to eight hours. Seminars and discussions on current and advanced topics in one or more aspects of physical and wave electronics, such as electromagnetics, microwave and millimeter wave circuits, photonics and optoelectronics, plasma electronics, microelectromechanical systems, solid state, and nonotechnology. May be repeated for credit with topic change. S/U grading.

279CS. Green Clean IGERT Brown-Bag Seminar. (1) Seminar, one hour. Required of students in Clean Energy for Industry (IGERT) Research. Literature seminar presented by graduate students and experts from around the country who conduct research in energy harvest, storage, and conservation. S/U grading.

285A. Plasma Waves and Instabilities. (4) Lecture, four hours; outside study, eight hours. Requisites: courses 101, and M185 or Physics M122. Wave phenomena in plasmas described by macroscopic fluid equations. Microscopic aspects; plasma oscillations, ion acoustic waves, cyclotron waves, hydro-magnetic waves, drift waves. Rayleigh/Taylor, Kelvin/Helmholtz, universal, and streaming instabilities. Application to experiments in fully and partially ionized gases. Letter grading.


295. Academic Technical Writing for Electrical En- gineers. (3) Seminar, three hours. Designed for electrical engineering Ph.D. students who have completed preliminary examinations. Students read models of good writing and learn to make rhetorical observations and writing decisions, improve their academic writing and learn to make rhetorical observations. Letter grading.

296. Seminar: Research Topics in Electrical Engi- neering. (2) Seminar, two hours; outside study, four hours. Advanced study and analysis of current topics in electrical engineering. Discussion of current re- search and literature in research specialty of faculty member teaching course. May be repeated for credit. S/U or letter grading.

297. Seminar Series: Electrical Engineering. (1) Seminar, 90 minutes; outside study, 90 minutes. Limited to graduate electrical engineering students. Weekly seminars and discussion by invited speakers on research topics of heightened interest. S/U grading.

298. Seminar: Engineering. (2 to 4) Seminar, to be arranged. Limited to graduate electrical engineering students. Seminars may be organized in advanced technical fields. If appropriate, field trips may be arranged. May be repeated with topic change. S/U or letter grading.

299. M.S. Project Seminar. (4) Seminar, to be arranged. Required of all M.S. students not in thesis option. Supervised research in small groups or individually under guidance of faculty mentor. Regular meetings, culminating report, and presentation required. Individual contract required; enrollment petitions available in Office of Graduate Student Affairs. S/U grading.

375. Teaching Apprentice Practicum. (1 to 4) Semi- nar, to be arranged. Preparation: apprentice personnel employment for graduate students. 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 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 Examina- tions. (2 to 16) 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 Examina- tions. (2 to 18) Tutorial, to be arranged. Limited to graduate electrical engineering students. S/U grading.

597C. Preparation for Ph.D. Oral Qualifying Examina- tion. (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. Supervised independent research for M.S. candidates, including thesis prospectus. S/U grading.

599. Research for and Preparation of Ph.D. Disserta- tion. (2 to 16) Tutorial, to be arranged. Limited to graduate electrical engineering students. Usuall taken after students have been advanced to candidacy. S/U grading.
Engineering Schoolwide Programs

Henry Samueli School of Engineering and Applied Science

UCLA

4624 Boelter Hall
Los Angeles, CA 90095-1601
(310) 825-9580
http://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 Degrees, available at the Graduate Division website, http://grad.ucla.edu/gasaa/division.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.Engr) 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

10A. Introduction to Complex Systems Science. (5) (Formerly numbered M10A.) Lecture, four hours. How and why complex patterns emerge in many fields of science? How can local interactions of large number of interdependent (often heterogeneous) entities, without global design or central control, produce such emergent order, whose explanation cannot be reduced to explanations at level of individual entities, is ubiquitous in biology and human social collectives, but also exists in certain physical processes such as earthquakes and some chemical reactions. Complexity also deals with how such systems undergo sudden changes, including catastrophic breakdowns, in absence of external force or central influence. Key aspect of biological and social collectives is their nature as complex adaptive systems, where individuals and groups adjust their behavior to external conditions. In biological and social systems, complexity science goes beyond traditional mathematics and statistics in its use of multilayer computational models that better capture these complex, adaptive, and self-organizing phenomena. Letter grading.

95. Internship Studies in Engineering. (2 to 4) Tutorial, two to four hours. Limited to freshmen/sophomores. Internship is professional experience to further academic preparation, provides opportunity for students to gain professional work experience in engineering firms, industry, laboratories, or government agencies. Students work under the direction of a professional engineer and/or research instructor supervised by a faculty advisor. Students must maintain an academic schedule of at least 12 units, including six units in engineering courses. Students are required to submit written or oral reports and to submit an internship report at end of internship. Students who have completed at least 12 engineering units may take this course to apply up to 12 units of credit toward their degree. Letter grading.

96. 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 career. Topics include general overview of variety of engineering careers, questions and concerns posed by students, and strategies for arranging engineering internships. Letter grading.

101. Principles of Nanoscience and Nanotechnology. (4) (Same as Materials Science M105.) Lecture, four hours; discussion, one hour; outside study, seven hours. Chemistry 20A, 20B, Physics 1C. Introduction to underlying science encompassing structure, properties, and fabrication of technologically important nanoscale systems. New phenomena that emerge in very small systems (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.

102. Synthetic Biosystems and Nanosystems Design. (4) Lecture, four hours; outside study, eight hours. Requisites: course M101, Life Sciences 3. Introduction to current progress in engineering to integrate biosciences and nanosciences into synthetic systems, where biological components are reengineered and rewired to perform desirable functions in both intracellular and cell-free environments. Discussion of basic technologies and systems analysis that deal with dynamic behavior, noise, and uncertainties. Design project in which students are challenged to design novel biosystems and nanosystems for non-trivial tasks. Letter grading.

103. Environmental Nanotechnology: Implications and Applications. (4) (Formerly numbered 103.) (Same as Civil Engineering M165.) Lecture, four hours; discussion, two hours; outside study, six hours. Survey of potential implications of nanotechnology to environmental systems as well as potential application of nanotechnology to environmental protection. Technical contents include three multidisciplinary areas: (1) physical, chemical, and biological properties of nanomaterials, (2) transport, 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) economics as they relate to technology management. How individuals, firms, and governments impact successful commercialization of high technology products and services. Letter grading.

111. Introduction to Finance and Marketing for Engineers. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Critical components of finance and marketing research and practice as they impact management of technology commercialization. Internal (backup) and external (marketplace) marketing and financing of high-technology innovation. Concepts include present value, future value, discounted cash flow, internal rate of return, return on assets, return on equity, return on investment, interest rates, cost of capital, and project, price, positioning, and promotion. Use of mathematical models and forecasting in management of technological innovation. Letter grading.

112. Laboratory to Market, Entrepreneurship for Engineers. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Critical components of entrepreneurship, finance, marketing, human resources, and accounting disciplines as they impact management of technological innovation. Topics include intellectual property management, team building, marketing, forecasting, and entrepreneurial finance. Students work in small teams studying technology management problems, to bring 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; discussion, one hour; outside study, seven 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 and process 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 junior/senior engineering majors. Holistic view of engineering discipline, covering life cycle of engineering, processes, and tools used in industry today. Multidisciplinary systems engineering perspective in which aspects of electrical, mechanical, material, and software engineering are integrat ed. Three specific cases of interaction, 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. Engineering and Society. (4) Lecture, four hours; discussion, three hours; outside study, five hours. Enforced requisite: English Composition 3 or 3H or English as a Second Language 36. Not open for credit to students with credit for course 185EW. Limited to sophomore/junior/senior engineering students. Professional and ethical considerations in practice of engineering. Impact of technology on society and on development of moral, ethical, and societal values. Contempo rary environmental, biological, legal, and other issues created by new technologies. Emphasis on research and writing within engineering environments. Writing and revision of about 20 pages total, including two individual technical essays and one team-written research report. Readings address technical issues and writing form. Satisfies engineering writing requirement. Letter grading.

185EW. Art of Engineering Endeavors. (4) Lecture, four hours; discussion, three hours; outside study, five hours. Enforced requisite: English Composition 3 or 3H or English as a Second Language 36. Not open for credit to students with credit for course 183EW. Designed for junior/senior engineering students. Non-technical skills and experiences necessary for engineering career success. Importance of group dynamics in engineering practice 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 to apply 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.

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188. Special Courses in Engineering. (4) Seminar, four hours; outside study, eight hours. Special topics in engineering for undergraduate students taught on experimental or temporary basis, such as those taught by resident and visiting faculty members. May be repeated for credit with topic or instructor change. Letter grading.

195. Internship Studies in Engineering. (2 to 4) Tu- torial, two to four hours. Limited to juniors/seniors. Internship studies course supervised by associate dean or designated faculty member. Further supervision to be provided by company for which students are doing internship. Students may be required to meet on regular basis with instructor and provide periodic reports of their experience. May not be applied to toward major until internship program is completed. May be repeated for credit. Individual contract with associate dean required. P/NP grading.

199. Directed Research in Engineering. (2 to 8) Tu- torial, to be arranged. Limited to juniors/seniors. Supervised individual research or investigation under guidance of faculty mentor. Culfminating paper or project may be required. May be repeated for credit with school approval. Individual contract required; enrollment permitted. Instructor approval required. College of Academic and Student Affairs. Letter grading.

Graduate Courses

200. Program Management Principles for Engi- neers and Professionals. (4) Lecture, four hours; outside study, eight hours. Designed for graduate stu- dents. Practical review of necessary processes and procedures to successfully manage technology pro- grams. Review of fundamentals of program planning, organizational structure, implementation, and perfor- mance tracking methods to provide program manager with necessary information to support decision- making process that provides high-quality products on time and within budget. Letter grading.

201. Systems Engineering. (4) Lecture, four hours; outside study, eight hours. Designed for graduate stu- dents. Practical review of major elements of system engineering process. Coverage of key elements: sys- tem requirements and flow down, product develop- ment cycle, functional analysis, system synthesis and trade studies, budget allocations, risk management metrics, review and audit activities and documenta- tion. Letter grading.

202. Reliability, Maintainability, and Supportability. (4) Lecture, four hours; outside study, eight hours. Requisite: course 201. Designed for graduate stu- dents with some 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 reliability, maintainability, and supportability — and their relationships, taught using probability theory. Topics also include fault de- tections and isolations and parts obsolescence. Dis- cussion of 6-sigma process, one effective design and manufacturing methodology, to ensure system reli- ability, maintainability, and supportability. Letter grading.

203. System Architecture. (4) Lecture, four hours; outside study, eight hours. Requisite: course 201. De- signed for graduate students with B.S. degrees in en- gineering or science and one to two years work expe- rience in selected domain. Art and science of archi- tecting. Introduction to architecting methodology — paradigm and tools. Principles of architecting through analysis of architecture designs of major existing sys- tems. Discussion of selected elements of architectural practices, fashioning or implementation models, design pro- gress, and architecture frameworks. Examination of professionalization of system architecting. Letter grading.

204. Trusted Systems Engineering. (4) Lecture, four hours. Trust is placed in information systems to be- come routine, including penetration of financial, medical, government, and national security systems. To build systems that can protect confidentiality, in- tegrity, and availability involves more than composing systems from network security, computer security, data security, cryptography, etc. One can use most secure components, and resulting system could still be vulnerable. Skills learned ensure that systems are architectured, designed, implemented, tested, and op- erated for specific levels of trust. Aspects include ass- essing vulnerabilities and risk for systems, establish- ing protection principles, and using them as guide to formulate system architectures; translating architect- ure into system design and verifying correctness of design; and constructing and following trusted devel- opment and implementation process. Letter grading.

215. Entrepreneurship for Engineers. (4) Lecture, four hours. Limited to graduate engineering students. Topics in starting and developing high-tech enterpris- es and intended for students who wish to comple- ment 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 re- quirement of M.S. online degree in Engineering. Proj- ect is completed under individual guidance from UCLA Engineering Executive Program students. Project required. May be repeated for credit. S/U grading.


471A-471C. Engineer in General Environment. (3-3-1.5) Lecture, three hours (courses 471A, 471B) and 90 minutes (course 471C). Limited to Engi- neering Executive Program students. Influences of human relations, laws, social sciences, humanities, and fine arts on development and utilization of natural and human resources. Interaction of technology and society past, present, and future. Change agents and resistance to change. S/U or letter (471A) grading; In Progress (471B) and S/U letter (471C) grading.

472A-472D. Engineer in Business Environment. (3-3-3-1.5) Lecture, three 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 prob- lems of firm, community, and nation, provided through cooperation and participation with California business corporations and government agencies. In Progress (472A, 472C) and S/U or letter (472D) grading.

473A-473B. Analysis and Synthesis of Large-Scale System. (3-3) Lecture, two and one-half hours. Limited to Engineering Executive Program students. Prob- lem area of modern industry or government is select- ed as class project, and its solution is synthesized us- ing quantitative methods and tools. Project also serves as laboratory in organization for goal-oriented technical group. In Progress (473A) S/U and letter (473B) grading.

495A. Teaching Assistant Training Seminar. (4) Seminar, four hours; outside study, eight hours. Preparation: appointment as teaching assistant. Lim- ited to graduate engineering students. Seminar on communication of engineering principles, concepts, and methods, preparation, organization of material, presentation, use of visual aids, grading, advising, and rapport with students. S/U grading.

M495B. Supervised Teaching Preparation. (2) (Same as English Composition M495E) Seminar, one hour. Requisite: course M495B. Required of all teach- ing assistants in their initial term of teaching Engineer- ing writing courses. Mentoring in group and individual meetings. Continued focus on composition pedago- gy, assessment of student writing, guidance of revisi- tion process, and specialized writing problems that may occur in engineering writing contexts. Practical concerns of preparing students to write course assign- ments, marking and grading essays, and conducting peer re- views and conferences. S/U grading.

M495C. Supervised Teaching Preparation. (2) (Same as English Composition M495F) Seminar, one hour. Requisite: course M495B. Required of all teach- ing assistant in their initial term of teaching Engineering writing courses. Mentoring in group and individual meetings. Continued focus on composition pedago- gy, assessment of student writing, guidance of revisi- tion process, and specialized writing problems that may occur in engineering writing contexts. Practical concerns of preparing students to write course assign- ments, marking and grading essays, and conducting peer reviews and conferences. S/U grading.

501. Cooperative Program. (2 to 8) Tutorial, to be arranged. Preparation: completion of UCLA graduate ad- visor and graduate student. Open to graduate students. Limited to graduate engineering students. Used to record enrollment of UCLA students in courses taken under cooperative arrangements with USC. S/U grading.
The English Department is dedicated to the study of the literatures and cultures of those parts of the world in which English is a primary language. Although committed to no single method or approach, the department requires a knowledge of British, American, and Anglophone literary history and an engagement with a range of methodological approaches that foster intellectual curiosity and critical thinking and encourage its students to be not only expert readers and writers but engaged and ethical citizens.

An understanding and appreciation of literature can furnish lifelong rewards. In addition to offering students such personal benefits, the department seeks to foster critical analysis and lucid writing and to teach them to think about how language and representation function in the world. Such skills are essential to success in a variety of professions for which the major in English can provide excellent preparation, including law, administration, business, teaching, media, and entertainment.

Within the 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.

Undergraduate Study

Students must have completed the Entry-Level Writing requirement before taking any courses in English (other than English Composition A or 2). For further information regarding Entry-Level Writing, see the Undergraduate Study section of this catalog.

The English Department offers a designated capstone program for English and American Literature and Culture majors. Students in both majors have the option of completing a capstone seminar or other culminating work that enables them to use knowledge and skills acquired through previous coursework to engage, under the guidance of a faculty member, in literary research or other creative projects that result in a final paper or other product.

Extra-Departmental Requirement in Foreign Literature or Foreign Language

All English majors must have completed either (1) level five or equivalent in any one foreign language or (2) level three or equivalent in one foreign language and two additional courses in foreign language or foreign literature, including foreign literature in translation (see course listings under Foreign Literature in Translation later in this section). Transfer students who have satisfied the College of Letters and Science foreign language requirement at the high school level through the IGETC program may satisfy the departmental requirement with five foreign language in translation courses. The courses may be taken on a P/NP grading basis.

English B.A.

Capstone Program

The Bachelor of Arts degree in English has an optional concentration in creative writing for students who have been admitted to and completed three creative writing workshops in the same genre. 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 English 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/admit _tr.htm for up-to-date information regarding transfer selection for admission.

The Major

Required: Ten 4- or 5-unit upper division English courses, including (1) four historical period courses, one from each of the following four periods: (a) literatures in English to 1500 — course 140A through 148 or indicated sections of 149, (b) literatures in English, 1500 to 1700 — course 150A through 157, indicated sections of 159, or 166A, (c) literatures in English, 1700 to 1850 — course 162A through 165C, 166B through 168, 176, or indicated sections of 169, and (d) literatures in English, 1850 to present — course M101B, M101C, M102A, M102B, M104A through M104D, M105B through M105E, 116B, 130, 131, 164B, 164C, 164D, 167A, 167B, 168, 170A through 174C,
176, or 179; (2) three breadth courses, one from each of three of the following four areas: (a) gender, race, ethnicity, disability, and sexual identity studies — English 100 through 109, M126, 135, 155, 163C, 165B, 166C, or indicated sections of 119, 139, 149, 159, 169, or 179, (b) imperial, transnational, and postcolonial studies — course M105A through M105D, 112D, 128, 130 through 135, 154, 157, 163B, 164D, 165A, 166A, 166B, 176, or indicated sections of 149, 159, 169, or 179, (c) genre studies, interdisciplinary studies, critical theory — course 111A through 129, 144, 146, 147, 153, 156, 161A, 161B, 161C, 163A, 163C, 164A through 164D, 167A, 167B, 171A through 177, or indicated sections of 149, 159, 169, or 179, and (d) creative writing — courses 136, 137, 138; (3) two elective courses; (4) one seminar from course 180 through 184, or M191A through M191E. Admission to creative writing workshops (courses 136, 137, 138) is by application only. Each course applied toward requirements for the major must be 4 or 5 units and be taken for a letter grade.

Creative Writing Concentration

The creative writing concentration consists of the same requirements as the major, with the exception that one breadth course must be taken from the creative writing area (English 136, 137, 138), and both electives must be creative writing workshops (courses 136, 137, 138). All other requirements remain the same. Students may declare this program as a concentration only after they have completed three creative writing workshops in a single genre. Students may not enroll in more than one workshop (course 136, 137, or 138) per term or in more than two workshops with the same instructor. No student may take for credit more than three workshops in any one creative writing genre. Students planning to select this program should contact the department counselor for further details.

American Literature and Culture B.A.

Capstone Program

Students are expected to meet with the undergraduate counselors and undergraduate faculty adviser to plan and follow a course of study that incorporates their interests and goals with the fulfillment of requirements for the degree.

Preparation for the Major

Required: English Composition 3, English 4W or 4HW or 4WS, 10A, 10B, 10C taken in the stated sequence (each course is a requisite for the next course). A grade of C or better is required in each course.

Transfer Students

Transfer applicants to the American Literature and Culture major with 90 or more units must complete the following introductory courses prior to admission to UCLA: one English composition course, one 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, M191A, M191B, M191C, or when treating American topics, 180, 181A, 181B, 182E, 182F, 184, M191D, M191E; two American literature courses, race, ethnicity, disability, and sexuality courses from M102A, M102B, M104A through 106 (also M100, M101B, M101C, M101D, M103, 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 department counselor.

Requirements

All honors students are required to take one upper division course from English 120 through 128 (may fulfill one of three required breadth courses) no later than Winter Quarter of the junior year. Students in the creative writing concentration are required to have completed or been accepted into their third workshop in a single genre prior to or concurrent with enrollment in course 191H. In Spring Quarter of the junior year, students must take course 191H (may fulfill one of two electives for the major). During Fall and Winter Quarters of the senior year, they take courses 198A and 198B, in which they write a thesis under the direction of a faculty member (198B may fulfill the second of two electives for the major). The thesis determines whether they receive highest honors, honors, or no honors.

English Minor

The English minor is designed for students who wish to enhance their major program with the benefits of intensive study of English language and literatures, including a better understanding and appreciation of literatures in English and improvement in critical thinking, reading, and writing skills.

To enter the minor, students must have an overall grade-point average of 2.0 or better, have completed English 10A with a grade of C or better, and have satisfied the English Composition 3 requirement and completed English 4W. Students must file a petition to declare the minor by meeting with a student affairs officer in the Undergraduate Counseling Office, 158/160 Humanities Building, (310) 825-1389. This allows them priority enrollment in many upper division courses.

Required Lower Division Courses (10 units): English 10B and 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 requirements or another minor. At least 15 upper division units applied toward the minor must be taken in residence during the regular academic year (excluding Summer Sessions) at UCLA. Transfer credit is subject to department approval; consult 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://grad.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 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 SH 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 as English as a Second Language 36. Introduction to literary analysis, with close reading and carefully written expositions from principal modes of literature: poetry, prose fiction, and drama. Minimum of 15 to 20 pages of revised writing. Satisfies Writing II requirement. Letter grading.

4WS. Critical Reading and Writing (Service Learning). (5) Lecture, fieldwork, two hours. Enforced requisite: English Composition 3 or 3H as English as a Second Language 36. Introduction to literary analysis, with close reading and carefully written expositions from selected works of literature: poetry, prose fiction, and drama. Minimum of 15 to 20 pages of revised writing. Service learning component includes meaningful work with off-campus agency selected by instructor. Satisfies Writing II requirement. Letter grading.

10A. Literatures in English to 1700. (5) Lecture, three hours; discussion, one hour. Enforced requisite: English Composition 3 or 3H, English 4W or 4HW, or equivalent. Emphasis on tools for literary analysis such as close reading, argumentation, historical and social context, and critical writing. Minimum of three papers (three to five pages each) or equivalent required. P/NP or letter grading.

10B. Literatures in English, 1700 to 1850. (5) Lecture, three hours; discussion, one hour. Enforced requisite: English Composition 3 or 3H, English 4W or 4HW, 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 requisite: English Composition 3 or 3H, English 4W or 4HW, 10A, 10B. Survey of major writers and genres, with emphasis on tools for literary analysis such as close reading, argumentation, historical and social context, and critical writing. Minimum of three papers (three to five pages each) or equivalent required. P/NP or letter grading.

20. Introduction to Creative Writing. (4) Lecture, four hours. Enforced requisite: satisfaction of Entry-Level Writing requirement. English Composition 3 or 3H or English as a Second Language 36. Open to credit-bearing nontransfer students. Election of topic and instructor required. 20W. Introduction to Creative Writing. (4) Lecture, four hours. Enforced requisite: satisfaction of Entry-Level Writing requirement. English Composition 3 or 3H or English as a Second Language 36. Open to credit-bearing nontransfer students. Election of topic and instructor required. 20W. Introduction to Creative Writing. (4) Lecture, four hours. Enforced requisite: satisfaction of Entry-Level Writing requirement. English Composition 3 or 3H or English as a Second Language 36. Open to credit-bearing nontransfer students. Election of topic and instructor required. Satisfies Writing II requirement; Letter grading.

M50. Introduction to Visual Culture. (5) (Same as Film and Television M50.) Lecture, three hours; discussion, one hour. 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.

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, nonfiction prose, and short fiction of such writers as Poe, Dickinson, Emerson, Faulkner, Ellison, and Morrison. P/NP or letter grading.

85. American Novel. (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. Development, with emphasis on form, of American novel from its beginning to present day. Includes works of such novelists as Hawthorne, Fitzgerald, Faulkner, Ellison, and Morrison. P/NP or letter grading.

85A-85Z. Lower Division Seminars: Special Topics in English. (5 each) Seminar, three hours. Limited to 15 students. Review of current issues such as plot construction, character and motivation, figurative language, symbolism, irony and ambiguity, character development, and critical writing. P/NP or letter grading.

88A-88Z. Lower Division Seminars: Special Topics in English. (5 each) Seminar, three hours. Limited to 15 students. Review of current issues such as plot construction, character and motivation, figurative language, symbolism, irony and ambiguity, character development, and critical writing. P/NP or letter grading.

90. Shakespeare. (5) Lecture, three hours; discussion, one hour. Enforced requisite: English Composition 3 or 3H. Examination of Shakespeare's breadth, artistic progress, and total dramatic achievement. P/NP or letter grading.

91A. Introduction to Poetry. (5) Formerly numbered 91A.) Lecture, three hours, one hour. Enforced requisite: satisfaction of Entry-Level Writing requirement. Recommended for instructional credential candidates. Study of critical issues (metrics, diction, figurative language, symbolism, irony and ambiguity, form and structure) and aesthetic issues, including evaluative criteria, followed by close critical analysis of selection of representative poems. P/NP or letter grading.

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; study of issues such as plot construction, characterization, specialization, and dramatic method; 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 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 Sophomores. (4) Seminar, three hours. Enforced requisite: English Composition 3 or 3H, English 4W or 4HW. 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 and identity, and through engagement with theoretical and methodological work — 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 highlights creation of ethnic categories and their effects on cultural production. P/NP or letter grading.

M101A. Premodern Queer Literatures and Cultures. (4)Seminar, same as Feminist Studies 101A, Fall Quarter 2011.) (Same as Gender Studies M105A 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 literary and cultural production from before 1980. Works by such authors as Sappho, Plato, Marlowe, Shakespeare, and others. 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 Gender Studies M105B 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 literary and cultural production 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 M101C.) (Same as Gender Studies M105C 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, 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. Writings and films by such authors as Andrew Holleran, Leslie Feinberg, Achy Obejas, Essex Hemphill, Audre Lorde, Cheryl Dune, 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 Gender Studies M105D and Lesbian, Gay, Bisexual, and Transgender Studies M101D.) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisite: English Composition 3 or 3H. Variable special topics course in queer literatures and cultures. Topics may include, but are not limited to, 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 Literature. (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 from outside the U.S. or produced during the 1980-1990 period. Issues include immigration, diaspora, generational conflict, appropriation of cultural traditions, eth-
nic/gender formation, interethnic 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.

M102B. Contemporary Asian American Literary Issues and Criticism. (5) (Not same as course M102B prior to Fall Quarter 2011.) (Same as Chicana and Chicano Studies M112B.) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisite: English Composition 3 or 3H. Survey of post-1960 Asian American literature. Explores key literary and critical issues, such as race and geography, aesthetics and activism, cultural work and immigrant labor, kinship and sexuality, model minority and Orientalism, and the role of novels, poetry, art, performance, memoirs, and essays. May be repeated for credit with topic or instructor change. P/NP or letter grading.

M103. Studies in Disability Literatures. (5) (Same as Disability Studies M103.) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisite: English Composition 3 or 3H. Survey of modes of disability in literature, with specific emphasis on thematic concerns. Topics may include introduction to disability studies; race, gender, and disability; disability narratives; etc. May be repeated for credit with topic or instructor change. P/NP or letter grading.

M104A. African American Epics. (5) (Same as Afro-American Studies M104A.) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisite: English Composition 3 or 3H. Introduction to survey of African American literature from 18th century to 1920. L1, including oral and written forms (folktales, spirituals, sermons; fiction, poetry, essays), by authors such as Phillis Wheatley, Frances Ellen Watkins, 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. Introduction to survey of 20th-century African American literature from New Negro Movement of Post-World War 1 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, 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 literature from late 1960s through 1970s. Topics include rise of Black Arts 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, Ishmael Reed, Audre Lorde, Paula 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 political perspectives and styles 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, Jamaica Kincaid, Alice Walker, and Amiri Baraka. 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. Special issues: African American literature and film, black diaspora literature, postmodern narrative, postcolonialism, and African American satire. May be repeated for credit with topic or instructor change. P/NP or letter grading.

M105A. Early Chicana/Chicano Literature, 1400 to 1920. (5) (Same as Chicana and Chicano Studies M105A.) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisite: English Composition 3 or 3H. Survey of Chicana/Chicano literature from poetry of Triple Alliance and Aztec Empire to 19th century Mexican Revolution (1810). Oral and written forms (poetry, corridos, testimonios, folklore, novels, short stories, and drama) by writers such as Nezahualcóyotl (Cortez Coyote), Cabaza de Vaco, Alfredo Ramos, Raul Echeverría, Eusebio Chacón, Daniel Venegas, and Lorenza Villegas de Maogon. P/NP or letter grading.

M105B. Chicana/Chicano Literature from Mexican Revolution to el Movimiento, 1920 to 1970s. (5) (Formerly numbered 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/Chicano literature from 1920s through Great Depression and World War II, ending with Chicana/Chicano civil rights movements. Oral and written narratives by writers including Conrado禾 León, Rigoberta Menchú, Aníbal González, Chávez, Mario Suárez, Oscar Acosta, and Evangelina Vigil. P/NP or letter grading.

M105C. Chicana/Chicano Literature since el Movimiento, 1970s to Present. (5) (Formerly numbered M105C.) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisite: English Composition 3 or 3H. Chicana/Chicano literature since 1970s, with particular emphasis on how queer and feminist activism as well as Central and South American migration have shaped 21st-century chicanidad. Oral, written, and visual narratives; oral and drama by writers including John Rechy, Gloria Anzaldúa, Los Bros Hernández, Ana Castillo, and Dagobertho Glib guide exploration of queer and feminist studies. Reagan generation, immigration debates, and emerging Latino/Latina 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 Canary Islands, Mexican Americans, 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, international exile and migration, border zones, enclaves and language, and mestizaje and its impact on cultural production. P/NP or letter grading.

M105E. Studies in Chicana/Chicano 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 intensive and thematic immersion in Chicana/Chicana and/or Latina/Latino literature. Topics include border, immigration, revolution, language, gender, sexuality, and diaspora, among others. May be repeated for credit with topic or instructor change. P/NP or letter grading.

M105SL. Seminar: Chicana/Chicana and/or Latina/Latina Literature — Service Learning. (5) (Same as Chicana and Chicano Studies M110SL.) Seminar, three or four hours; field placement, three or four hours. Enforced requisite: English Composition 3 or 3H. Specialized studies in Chicana/Chicana and/or Latina/Latina literature. In-depth study of various topics related to Chicana/Latina communities in Southern California, including Chicana/Chicana visions of Los Angeles; immigration, migration, and exile; autobiography and historical changes; Chicana/Chicana journalism and labor and service. Learning component includes minimum of 20 hours of meaningful work with agency involved with Chicana/Chicana and/or Latina/Latina communities and selected by instructor. 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. Focus on women writers that may include historical, regional, national, or thematic emphasis, with possible topics such as authorship, self-writing, sexuality, gender, and genre. May be repeated for credit with topic or instructor change. P/NP or letter grading.

M107A. Studies in Women's Writing. (5) (Formerly numbered M107A.) (Same as Gender Studies M107A.) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisite: English Composition 3 or 3H. Survey of women's writings that 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 M107B prior to Fall Quarter 2011.) (Same as Gender Studies 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, comparative, or thematic and include other intersectional vectors of identity and representation such as race and ethnicity. May be repeated for credit with topic or instructor change. P/NP or letter grading.

108. Interrelational Encounters. (5) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisite: English Composition 3 or 3H. Study of literary, cultural, and/or political narratives introduced by people from different ethnic and religious backgrounds and providing comparative cultural perspectives on living in multiethnic societies. May be repeated for credit with topic or instructor change. P/NP or letter grading.
111C. Topics in Biblical Literature. (5) (Formerly numbered 108C.) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 110A, 111A, and 111B. Study of topics in Hebrew Bible and/or New Testament, with attention to particular literary themes, motifs, genres, and modes of interpretation. Discussion of contrasts and commonalities among the oldest discrete periods or individual authors in literature in English. 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, folklore, and biblical narrative. 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. 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 not required. 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. Study directed toward English majors of main features in grammatical, lexical, and phonetic condition of English language from Indo-European time to present. P/NP or letter grading.

113A. History of English Language. (5) (Formerly numbered 112.) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisite: English Composition 3 or 3H. Study of historical evolution of aesthetic forms, changing conceptions, cultural sublimations, and literary uses and textual practices in language, narrative, hybridity (genre, medium), typographic and other material aspects of text such as binding and book design. Focus generally on texts from 20th century and later, but can include readings dating to beginning of novel. May be repeated for credit with topic or instructor change. P/NP or letter grading.

116B. Introduction to Electronic Literature. (5) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisite: English Composition 3 or 3H. Overview of literatures involving digital technologies, such as hypertext fiction, interactive fiction, animated intermedia works, video game narrative, and works employing network protocols and print-based works influenced by digital culture. Basic introduction to new media theory. P/NP or letter grading.

117. Literature of California and American West. (5) (Formerly numbered 119.) 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 science, history, politics, philosophy, music, photography, visual arts, popular culture. May be repeated for credit with topic or instructor change. 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 literatures in English in relation to other disciplines such as science, history, politics, philosophy, music, photography, visual arts, popular culture. May be repeated for credit with topic or instructor change. P/NP or letter grading.

118B. Literature and Other Arts. (5) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisite: English Composition 3 or 3H. Investigation of relationship of literature to one or more other arts, including music (opera, musical theater, popular music), visual arts (painting, sculpture and other plastic arts, performance art, dance, architecture). Topics vary and may not include 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, 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. 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, 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 requisites: courses 10A, 10B. Investigation of texts and ideas in history of aesthetics, critical theory, and interpretation from Greeks through 18th century. Readings may include Gorgias, Plato, Aristotle, Longinus, Biblical literature, Schiller, and Hegel. May not be repeated for credit. P/NP or letter grading.

121. Modern and Contemporary Aesthetics and Critical Theory. (5) (Formerly numbered 110 prior to Fall Quarter 2011.) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B, 10C. Recommended: courses 120, 121. Taken with Raymond Williams’ classic vocabulary of culture and society, investigation of fundamental theoretical concepts, or keywords, that have emerged from variety of intellectual discourses to shape conceptual and cultural studies. Consideration of lexical development of such key-words; how they alter and enrich assumptions about textuality, readers, and authorship; and how they engender interpretive paradigms and methodologies for study of literature and culture. May be repeated for credit with topic or instructor change. 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 requisites: courses 10A, 10B, 10C. Recommended: courses 120, 121. Exploration of theoretical vocabulary and productive approaches to literary texts. Investigation of how the- orists negotiate between abstract concepts of history and situated historical narratives, how histories are constructed, troped, and given authority, how histo- ries constitute past and present in relationship to each other to stabilize tradition or induce change, and comp- lex 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.

123. Theories of Religion. (5) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B, 10C. Recommended: courses 120, 121. Exploration of the- ories of religion and history and productive approaches to literary texts. Investigation of how the- orists negotiate between abstract concepts of history and situated historical narratives, how histories are constructed, troped, and given authority, how histo- ries constitute past and present in relationship to each other to stabilize tradition or induce change, and comp- lex 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 History. (5) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B, 10C. Recommended: courses 120, 121. Examination of the relationship be- tween 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 ap- proaches to reading. Selected topics may address liter- ary 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. Recommended: courses 120, 121. Exploration of ways literatures and cultural formations perform violence and its effects in their interrelated significance for making of culture. Readings to be interdisciplinary, with possible empha- sis on impact of changing ideas of gender and sexu-
127. Performance, Media, and Cultural Theory. (5) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B, 10C. Recommended: courses 120, 121. Examination of the relationship between culture and imperialism through lens 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 requisites: courses 10A, 10B, 10C. Recommended: courses 130, 131. Exploration of methodological, aesthetic, and theoretical implications of postcolonial and transnational approaches to study of literature and culture. Topics may include theories of subaltern, orientalist, feminist, and/or indigenous representation and histories and may address issues of national sovereignty in wake of globalization and neocolonialism. May be repeated for credit with topic or instructor change. P/NP or letter grading.

129. Topics in Literature, Interdisciplinary Studies, and Critical Theory. (5) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B, 10C. Recommended: courses 120, 121. Consult Schedule of Classes for author, period, genre, or subject to be studied in specific term. Depending on instructor, emphasis may be historical, regional, national, comparative, or thematic. May be repeated for credit with topic or instructor change. P/NP or letter grading.

130. Introduction to Postcolonial Literatures. (5) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B, 10C. Introduction to major writers of Africa, Caribbean, South Asia, and indigenous Pacific. May not be repeated for credit. P/NP or letter grading.

131. Studies in Postcolonial Literatures. (5) (Formerly numbered 169B.) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B, 10C. Strongly recommended: course 130. Survey of how colonialism and decolonization have shaped literary and cultural expression, with special emphasis on cultural or thematic concerns. Topics may include literatures of Africa and African diaspora, environment and empire, Caribbean contact zones, or literatures of indigenous Pacific. May be repeated for credit with topic or instructor change. P/NP or letter grading.

132. Culture and Imperialism. (5) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B, 10C. Exploration of relationship between culture and imperialism through lens of literary texts to raise questions about what study of empire tells about relationship between power and knowledge, power and ideology, and power and symbols of imperial rule, including how both metropolitan and peripheral or colonial spaces were transformed. Emphasis may be on particular historical period or may take thematic approach, such as Orientalism. Topics may include construction of gender, race, otherness, nature, religion, and nation. May be repeated for credit with topic or instructor change. P/NP or letter grading.

133. Transatlantic Literatures and Cultures. (5) (Not same as course 133 prior to Fall Quarter 2011.) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B, 10C. Study of literatures of Atlantic to examine cultural, political, and ideological questions that followed from transatlantic movement of people, ideas, commodities, and cultural artifacts. In addition to literatures of Britain and U.S., coverage may include texts from Africa, Caribbean, Mexico, South America, Spain, and others. May be repeated for credit with topic or instructor change. P/NP or letter grading.

134. 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 tradition and modernity frame analysis of literary texts, particularly relationship between literature and national identity. Other topics include nation building in relationship to regional identities as well as 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.

135. Literature of Americas. (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 Americas, with emphasis on complex ways in which letters of North America, Central America, South America, and Caribbean forge distinctly American perspective on global affairs. Spans literature from age of encounter through postindependence and Latin American independence movements and beyond, considering such 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.

136. Creative Writing: Poetry. (5) (Formerly numbered 133.) Seminar, three or four hours. Enforced requisites: English Composition 3 or 3H, English 4W or 4HW. Weekly exercises in writing of poetry, with practice in standard forms and study of techniques. Classroom discussion based on student work. Enrollment in more than one section per term not permitted. May be repeated for maximum of 15 units. No more than 10 units may be completed with same instructor. P/NP or letter grading.

137. Creative Writing: Short Story. (5) (Formerly numbered 134.) Seminar, three or four hours. Enforced requisites: English Composition 3 or 3H, English 4W or 4HW. Workshop in the writing of short 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.

138. Topics in Creative Writing. (5) Seminar, three hours. Enforced requisites: English Composition 3 or 3H, English 4W or 4HW. Introductory workshop in genre(s) of instructor choice, that may include mixed genres, playwriting, screenwriting, literary fiction, or others. Enrollment in more than one section per term not permitted. May be repeated for maximum of 10 units. May not be used to satisfy workshop requirements for English creative writing concentration. P/NP or letter grading.

139. Individual Authors. (5) (Formerly numbered 110.) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisite: English Composition 3 or 3H. Specialized study of work of single poet, dramatist, prose writer, or novelist. May be repeated for credit with topic or instructor change. P/NP or letter grading.

140A. Chaucer: Troilus and Criseyde and Selected Minor Works. (5) (Formerly numbered 141B.) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B. Intensive study of Troilus and Criseyde and selected minor works of Chaucer, such as Book of the Duchesse, House of Fame, Parliament of Fowls, etc. P/NP or letter grading.

141. Early Medieval Literature. (5) (Formerly numbered 150A.) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B. Major poetry and prose of early medieval Britain, including epic, romance, history, saints' lives, and travel literature. Texts and topics include Beowulf, V kings, poems on women, Bede, and Kings Alfred's Dream. May be repeated for credit with topic or instructor change. P/NP or letter grading.

142. Later Medieval Literature. (5) (Formerly numbered 150B.) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B. Reading and historical explication of major writers of later medieval Britain (e.g., Gawain-poet, Langland, Gower, Margery Kempe, Malory, miracle and morality plays, prose, and lyrics). P/NP or letter grading.

143. Drama to 1576. (5) (Formerly numbered 152A.) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B. English drama from its Latin and Anglo-Norman roots to opening of first public playhouse. P/NP or letter grading.

144. Medieval Romance and Literatures of Court. (5) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B. Investigation of medieval literature and its complex relationships with traditions of dissident medieval English culture, encompassing hagiography, vision, conversion narrative, interreligious debate, heresy trials, and Lollard manifestos and translations. Texts may include Dream of Rood, South English Legendary, Anonymous ‘Piers Plowman’, and Gower's Confessio Amantis. Drama, and selected minor manuscripts such as Aucassin nec偷 manuscript or Exeter book, framed narratives such as Deameron, Canterbury Tales, 1001 Nights, and Gower's Confessio Amantis. May be repeated for credit with topic or instructor change. P/NP or letter grading.

145. Medieval Literatures of Devotion and Dissent. (5) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B. Exploration of devotional genres and their complex relationships with traditions of dissident medieval English culture, encompassing hagiography, vision, conversion narrative, interreligious debate, heresy trials, and Lollard manifestos and translations. Texts may include Dream of Rood, South English Legendary, Anonymous ‘Piers Plowman’, and Gower's Confessio Amantis. Drama, and selected minor manuscripts such as Aucassin nec偷 manuscript or Exeter book, framed narratives such as Deameron, Canterbury Tales, 1001 Nights, and Gower's Confessio Amantis. May be repeated for credit with topic or instructor change. P/NP or letter grading.

146. Medieval Story Cycles and Story Collections. (5) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B. Exploration of medieval story cycles and story collections as narrative forms. Medieval story cycles engage in complex literary conversations across medie- val cultures, periods, genres, and languages, while story collections often stage art of storytelling within narrative frame to invite self-consciousness about powers of literary production itself. Texts may include cycles such as texts gathered as Matter of Britain, Matter of France, Matter of Germany, Matter of Flanders, Matter of Italy, Matter of Rome, Matter of Spain, and selected minor manuscripts such as Aucassin nec偷 manuscript or Exeter book, framed narratives such as Deameron, Canterbury Tales, 1001 Nights, and Gower's Confessio Amantis. Drama, and selected minor manuscripts such as Aucassin nec偷 manuscript or Exeter book, framed narratives such as Deameron, Canterbury Tales, 1001 Nights, and Gower's Confessio Amantis. May be repeated for credit with topic or instructor change. P/NP or letter grading.

147. Medieval Histories, Chronicles, and Records. (5) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B. Investigation of medieval history writing as literary tradition. Medieval histories survive in every language of medieval Britain, including Latin, Old English, Welsh, Irish, Anglo-Norman French. May be repeated for credit with topic or instructor change. P/NP or letter grading.

148. Medieval Latin Literature. (5) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B. May adopt thematic approach, such as critical perspectives on medieval Latin literature, focusing on cultural, religious, and political traditions. May be repeated for credit with topic or instructor change. P/NP or letter grading.
pressures of present tense. Texts may include histories, chronicles, material records, and historiographically engaged texts. May be repeated for credit with topic or instructor change. P/NP or letter grading.

148. Cultures of Middle Ages. (5) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B. Interdisciplinary survey of premodern medieval societies, with special emphasis on complex interactions between different ethnic and cultural traditions of medieval world. Examination of processes of intercultural encounter and transformation in a variety of premodern societies, including complex medieval city, crusade, travel literature, and literature of contact zones, including interactions between Celtic, Anglo, and Norman societies, and debates between medieval other to modern and contemporary. P/NP or letter grading.

149. Medievalisms. (5) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B. Study of medieval histories and cultures and as products of later 18th-century Romantic writing and emergence of new forms such as dramatic monologue and novel-in-verse. May be repeated for credit. P/NP or letter grading.

150A. Shakespeare: Poems and Early Plays. (5) (Formerly numbered 142A) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B. Intensive study of selected poems and representative comedies, histories, and tragedies through Hamlet. P/NP or letter grading.

150B. Shakespeare: Later Plays. (5) (Formerly numbered 142B) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B. Intensive study of representative problem plays, major tragedies, Roman plays, and romances. P/NP or letter grading.

150C. Topics in Shakespeare. (5) (Formerly numbered 142C) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B. Study of major works in their cultural context. May be repeated for credit with topic or instructor change. P/NP or letter grading.

151. Milton. (5) (Formerly numbered 143) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B. Study of major works in their cultural context. May be repeated for credit with topic or instructor change. P/NP or letter grading.

152. Literatures of English Renaissance and Early Modern Period. (5) (Formerly numbered 151.) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B. Study of major works in their cultural context. May be repeated for credit with topic or instructor change. P/NP or letter grading.

153. Theatrical Renaissance: Early Modern Texts and Performances. (5) (Formerly numbered 152B) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B. Topics may include professional and amateur performances in court, cities, churches, and countryside of varied sorts of texts — masques, religious drama, secular drama, charivari — alongside examination of texts, performers, and performance spaces from 1520 to 1700. Enforced for credit with topic or instructor change. P/NP or letter grading.

154. Renaissance Worlds. (5) (Not same as course 154 prior to Fall Quarter 2011.) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B. Variable topics, including travel literature, exploration and expansion, transatlantic and transceanic texts, science and cosmography, conceptual worlds of myth and philosophy, as expressed in literature and other arts. May be repeated for credit with topic or instructor change. P/NP or letter grading.

155. Renaissance Subjects. (5) (Not same as course 155 prior to Fall Quarter 2011.) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B. Literary representations of personal and public experience in modern period, with attention to issues such as personal voice, relations of privacy, community, bodies/souls, selves/others, as impacted by quotients such as gender, sexuality, race, and ethnicity as they are characterized. 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 associated with Reformation and Counter-Reformation enterprises in early modern period and consideration of how various kinds of writing — poems, prayer books, sermons, historical chronicles, essays, travel narratives, trial records — reflect and assess religious ferment of era. Coverage of broader historical range such as from Henry VIII’s break with Rome to execution of Charles I or one specific topic such as varieties of martyrdom, art of confession, or conversion narratives. 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 Renaissance literature and culture in relation to literature and culture of continental Renaissance. Topics may include epic tradition, fore-runners of novel, Renaissance humanisms, literature of love, monsters and marvels, representing nature, Ovidian transformations. May be repeated for credit with topic or instructor change. P/NP or letter grading.

159. Topics in Literature, circa 1500 to 1700. (5) Lecture, four hours; discussion, one hour (when scheduled). Examination of literatures from or about this time period. Consult Schedule of Classes for subject to be studied in specific term. May be repeated for credit with topic or instructor change. P/NP or letter grading.

160A. Literature of Restoration and Earlier 18th Century. (5) (Formerly numbered 154.) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B. Study of major works as literary documents and as products of Restoration and earlier 18th-century thought. P/NP or letter grading.

160B. Literature of Later 18th Century. (5) (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. Consideration of poetry across genres and through period. Topics may include rise of satire, verse forms including Pin- daric ode, mock-epic, and verse-epistle, questions of literary imitation and originality, poetry's relation to the essay and novel. 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. Study of major novels until 1850. May be repeated for credit with topic or instructor change. P/NP or letter grading.

162A. Earlier Romantic Literature. (5) (Formerly numbered 160.) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B. Intensive study of writings by Blake, Wordsworth, Coleridge, and Austen, with collateral readings from such authors as Godwin, Burke, Paine, Radcliffe, Edgeworth, Baillie, C. Smith, Burns, Southey, D. Wordsworth, Lamb, DeQuincey, and Scott. P/NP or letter grading.

162B. Later Romantic Literature. (5) (Formerly numbered 161.) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B. Intensive study of writings by Byron, Keats, Percy Shelley, and Mary Shelley, with collateral readings from such authors as Hazlitt, Hunt, Lord, Clare, Moore, Peacock, Landon, Akín, Hemans, and Prince. P/NP or letter grading.

163A. Romanticism and Revolution. (5) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B. Exploration of relationships among and between different revolutionaries and revolutionaries, political, economic, and aesthetic — in British Romanticism. Development of literatures of literary texts that situate them in revolutionary context out of which they emerged, and to which they contributed in turn. Reception of literary texts and extra-literary texts emerged in common relationship; development of deeper understanding of nature of Romanticism itself. Readings from work of Blake, Wordsworth, Coleridge, Southey, Byron, Austen, 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. Study of works from the transatlantic movement of peoples, ideas, and cultural artifacts, expansion of notions of Romanticism to include transoceanic perspectives that understand early 19th-century Romantic literature as transatlantic 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. Coverage of six novels of Jane Austen, as well as literary works that most influenced her: Mary Wollstonecraft's Vindication of the Rights of Woman and Maria Edgeworth's Belinda. P/NP or letter grading.

164A. Earlier 19th-Century Poetry. (5) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B. Developments in English poetic genres from time of Napoleonics Wars to middle decades of 19th century. Readings enable students to understand legacies of 18th-century and Romantic writing and emergence of new forms such as dramatic monologue and novel-in-verse. P/NP or letter grading.

164B. 19th-Century Critical Prose. (5) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B. Study of traditions in critical thought from 1800 to 1900 in relation to development of cultural and literary criticism, social thought, and political writing. P/NP or letter grading.

164C. 19th-Century Novel. (5) (Formerly numbered 159.) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B. Study of development of novel from 1800 to 1900, with focus on evolution of genre in relation to cultural, social, and political contexts in which readings were composed, circulated, and received. May be repeated for credit with topic or instructor change. P/NP or letter grading.

164D. Global 19th Century. (5) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B. Examination of 19th-centu-
ry literature as global phenomenon. Ways imaginative works engaged with 19th-century global formations, that may include structures and discourses of empire, international law, communication and transport systems, political boundaries and state sovereignty, slave trade, transnational economies, travel and exploration, religious communities, military engagements, and/or cultural relations. Credit may not be repeated for credit. P/NP or letter grading.

165A. Imperial Culture, 1700 to 1850. (S) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B. Exploration of relationship between culture and imperialism in 18th and 19th centuries. Discussion of relationship between literary and extra-literary texts and shifting patterns and ideologies of imperial rule, as metropolitan and peripheral spaces were transformed beyond recognition in this period. Particular attention to representations of otherness both in emergent metropolitan center and in sites of contact and conquest overseas, shifts in forms of Orientalism, developing concepts of race and nation, and ways imperial culture gradually infused almost every aspect of British culture and literature by middle of 19th century. May not be repeated for credit. P/NP or letter grading.

165B. Gender, Sexuality, and Body, 1700 to 1850. (S) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B. Examination of gender in literature of period known for its invention of sex/gender system. Topics may include varying representations of gender and sexuality across period, gender and authorship, and literature of the sciences. May be repeated for credit with topic or instructor change. P/NP or letter grading.

166C. Protestant Dissent and English Literature, 1640 to 1683. (S) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisite: English Composition 3 or 3H. Religious doctrines, political ideologies, cultural practices, and aesthetics of Protestant dissent in relation to transatlantic radicalism, but main topic is British dissent. Adaptations of such religions as Lutheranism, Calvinism, Anabaptism, Unitarianism, and Methodism in Scotland, England, and Wales from English Civil War and Glorious Revolution to Reform Act of 1832. Texts include representative theology and political theory (Luther, Calvin, Locke, Priestley, Paine, Wollstonecraft) and representative poetry and fiction (Milton, Byrom, Defoe, Blake, Coleridge, Shelley, Byron). P/NP or letter grading.

166A. Colonial Beginnings of American Literature. (S) Formerly numbered 170A. Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B, 10H. Historical survey of American literatures from Revolution through early republic, with emphasis on genres that express distinctive colonial identities, myths, and religious visions. P/NP or letter grading.

166B. American Literature, 1776 to 1832. (S) Formerly numbered 170B. Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B. Historical survey of American literatures from Revolution through early republic, with emphasis on genres that reflect systematic attempts to create representative national literature and attention to American identity, and postcolonial perspectives. P/NP or letter grading.

166C. American Literature, 1832 to 1865. (S) Formerly numbered 171A. Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B, 10H. Historical survey of American literatures from Jacksonian era to end of Civil War, including emergent tradition of American Romanticism, augmented and challenged by genres of popular protest urging application of democratic ideals to questions of race, gender, and social equality. P/NP or letter grading.

167A. American Poetry to 1900. (S) Formerly numbered 174A. Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B. Study of American poetry from Puritan period through end of 19th century. P/NP or letter grading.

167B. American Fiction to 1900. (S) Formerly numbered 173A. Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B, 10H, 10I. Study of American fiction (both novels and short stories) from its beginning to end of 19th century. P/NP or letter grading.

168. Major American Writers. (S) not same as course prior to Fall Quarter 2011.) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B, 10H. Broad survey of representative American writers across several centuries, designed to give concise account of broad narrative of American literary development, from origins through 19th century. Includes mainly works that have traditionally been identified as American classics and asks both what makes American literature distinctive and what its relationships are to other literatures in English. P/NP or letter grading.

169. Topics in Literature, circa 1700 to 1850. (S) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B. Examination of literatures from or about this time period. 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.

170A. American Literature, 1865 to 1900. (S) 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 I. P/NP or letter grading.

170C. American Literature since 1945. (S) Formerly numbered 172B. Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B, 10C. Historical survey of American literature since end of World War II. P/NP or letter grading.

171A. Later 19th-Century Poetry. (S) Not same as course 171A prior to Fall Quarter 2011.) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B, 10C. Development in English poetic genres in relation to significant movements such as aestheticism, decadence, feminism, and imperialism from middle decades of 19th century to turn of 20th century. P/NP or letter grading.

171B. 20th-Century British Poetry. (S) Formerly numbered 165I. Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B, 10C. Survey of major British poets from 1900 to present. P/NP or letter grading.

171C. 20th-Century British Fiction. (S) Formerly numbered 166I. Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B, 10C. Development in English fiction and short story writers from 1900 to present. P/NP or letter grading.

172A. Drama, 1850 to 1945. (S) Formerly numbered 167I. 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.

172B. Drama, 1945 to Present. (S) Formerly numbered 168I. 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. (S) 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. Historical period may vary with instructor. May be repeated for credit with topic or instructor change. P/NP or letter grading.

173A. American Poetry, 1762 to 1945. (S) Formerly numbered 174B.) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B, 10C. Study of American poetry from beginning to end of 20th century, including writers such as Howells, James, Twain, Norris, Dickinson, Crane, Chestnut, Gilman, and others working in models of realism and naturalist novel, regional and vernacular prose, and poetry. P/NP or letter grading.

173A. American Fiction, 1900 to 1945. (S) 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.

174A. American Fiction since 1945. (S) 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. (S) Not same 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 fiction of the same period. May be repeated for credit with topic or instructor change. P/NP or letter grading.

175. American Nonfictional Prose. (S) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B, 10C. Study of American nonfictional prose (essays, autobiographies, travel narratives, and other). Particular genre and historical period vary with instructor. May be repeated for credit with topic or instructor change. P/NP or letter grading.

176. Hemispheric American Literature. (S) Not same as course 176 prior to Fall Quarter 2011.) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B, 10C. Examination of primarily North American literature from hemispheric rather than nation-based perspective. May be repeated for credit with topic or instructor change. P/NP or letter grading.

177. Interdisciplinary Studies of American Culture. (S) Formerly numbered 178A.) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B, 10C. Interdisciplinary study of American literature in its relationships to other disciplines, including art, architecture, film, history, music, and various social sciences. May be repeated for credit with topic or instructor change. P/NP or letter grading.

179. Topics in Literature, circa 1850 to Present. (S) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B, 10C. Examination of literatures from or about this time period. 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.

180. Topics in Language and Literature. (5) Seminar, three or four hours. Enforced requisites: courses 10A, 10B, 10C. Consult Schedule of Classes for author, period, genre, or subject to be studied in specific term. May be repeated for credit with topic or instructor change. P/NP or letter grading.

181A. Topics in Genre Studies. (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 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.

181B. Topics in 19th-Century American Literature. (Formerly numbered 182B) Seminar, three or four hours. Enforced requisites: courses 10A, 10B, 10C. Consult Schedule of Classes for author, period, genre, or subject to be studied in specific term. May be repeated for credit with topic or instructor change. P/NP or letter grading.

182A. 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 author, period, genre, or subject to be studied in specific term. May be repeated for credit with topic or instructor change. P/NP or letter grading.

183A. Topics in African American Literature. (Formerly numbered 182A) Seminar, three or four hours. Enforced requisites: courses 10A, 10B, 10C. Consult Schedule of Classes for author, period, genre, or subject to be studied in specific term. May be repeated for credit with topic or instructor change. P/NP or letter grading.

182B. Topics in Renaissance and Early Modern Literature. (Formerly numbered 182B) Seminar, three or four hours. Enforced requisites: courses 10A, 10B, 10C. Consult Schedule of Classes for author, period, genre, or subject to be studied in specific term. May be repeated for credit with topic or instructor change. P/NP or letter grading.

182C. Topics in 18th-Century Literature. (Formerly numbered 182C) Seminar, three or four hours. Enforced requisites: courses 10A, 10B, 10C. Consult Schedule of Classes for author, period, genre, or subject to be studied in specific term. May be repeated for credit with topic or instructor change. P/NP or letter grading.

182D. Topics in 19th-Century Literature. (Formerly numbered 182D) Seminar, three or four hours. Enforced requisites: courses 10A, 10B, 10C. Consult Schedule of Classes for author, period, genre, or subject to be studied in specific term. May be repeated for credit with topic or instructor change. P/NP or letter grading.

182E. Topics in 20th- and 21st-Century Literature. (Formerly numbered 182E) Seminar, three or four hours. Enforced requisites: courses 10A, 10B, 10C. Consult Schedule of Classes for author, period, genre, or subject to be studied in specific term. May be repeated for credit with topic or instructor change. P/NP or letter grading.

182F. Topics in 20th- and 21st-Century American Literature. (Formerly numbered 182F) Seminar, three or four hours. Enforced requisites: courses 10A, 10B, 10C. Consult Schedule of Classes for author, period, genre, or subject to be studied in specific term. May be repeated for credit with topic or instructor change. P/NP or letter grading.

183B. Topics in 19th-Century American Literature. (Formerly numbered 182B) Seminar, three or four hours. Enforced requisites: courses 10A, 10B, 10C. Consult Schedule of Classes for author, period, genre, or subject to be studied in specific term. May be repeated for credit with topic or instructor change. P/NP or letter grading.

183C. Topics in 20th- and 21st-Century American Literature. (Formerly numbered 182C) Seminar, three or four hours. Enforced requisites: courses 10A, 10B, 10C. Consult Schedule of Classes for author, period, genre, or subject to be studied in specific term. May be repeated for credit with topic or instructor change. P/NP or letter grading.

184. Capstone Seminar: English. (5) Seminar, three hours. Enforced requisites: courses 10A, 10B, 10C, and completion of at least four upper division courses required for major. May be repeated for credit with topic or instructor change. P/NP or letter grading.

185A. Topics in Medieval Literature. (Formerly numbered 181A) Seminar, three or four hours. Enforced requisites: courses 10A, 10B, 10C. Consult Schedule of Classes for author, period, genre, or subject to be studied in specific term. May be repeated for credit with topic or instructor change. P/NP or letter grading.

185B. Topics in Renaissance and Early Modern Literature. (Formerly numbered 181B) Seminar, three or four hours. Enforced requisites: courses 10A, 10B, 10C. Consult Schedule of Classes for author, period, genre, or subject to be studied in specific term. May be repeated for credit with topic or instructor change. P/NP or letter grading.

186. Seminar: English. (5) Seminar, three or four hours. Enforced requisites: courses 10A, 10B, 10C, and completion of at least four upper division courses required for major. May be repeated for credit with topic or instructor change. P/NP or letter grading.

187. Seminar: English. (5) Seminar, three or four hours. Enforced requisites: courses 10A, 10B, 10C, and completion of at least four upper division courses required for major. May be repeated for credit with topic or instructor change. P/NP or letter grading.

188. Seminar: English. (5) Seminar, three or four hours. Enforced requisites: courses 10A, 10B, 10C, and completion of at least four upper division courses required for major. May be repeated for credit with topic or instructor change. P/NP or letter grading.

189. Seminar: English. (5) Seminar, three or four hours. Enforced requisites: courses 10A, 10B, 10C, and completion of at least four upper division courses required for major. May be repeated for credit with topic or instructor change. P/NP or letter grading.

190H. Honors Research Colloquia in English. (1) Seminar, three or four hours. Enforced requisites: courses 10A, 10B, 10C. 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. (Formerly numbered M179A) Seminar, three or four hours. Enforced requisite: English Composition 3 or 3H. Variable specialized studies course in African American literature. Topics may include African American literature, Afric-African American Poetry. May be repeated for credit with topic or instructor change. P/NP or letter grading.

M191B. Topics in Chicana/Chicana and/or Latina/Latino Literature. (Formerly numbered M179B) Seminar, three or four hours. Enforced requisite: English Composition 3 or 3H. Variable specialized studies course in Chicana/Chicana and/or Latina/Latino literature. Topics include labor and literature; Chicana/Chicana visions of Los Angeles; immigration, migra-tion, and exile; autobiography and historical change; Chicana/Chicana journalism; literary Native American; specific literary genres. May be repeated for credit with topic or instructor change. P/NP or letter grading.

M191C. Topics in Asian American Literature. (Formerly numbered M179C) 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 nation-alities and ethnic communities; themes of transnational migration; cross-cultural, interdisciplin ary, 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 English. (4) Semin-nar, three hours. Enforced requisite: one course from 120 through 128. 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 advisor. May be repeated for credit. Letter grading.

193. Colloquia and Speakers’ Series Undergraduate Seminars: English. (1) Seminar, three hours. Enforced requisite: one course from 120 through 128. Open only to students who are eligible and apply for honors program in English. Discussion of current critical literature and/or creative writings by writers, artists, and scholars. Exploration in greater depth of literary topics and creative work presented through sponsored forums, speakers’ series, and colloquia. May be repeated for credit. P/NP grading.

195. Community or Corporate Internships in English. (4) Tutorial, to be arranged. Limited to juniors/seniors. Individual internship in supervised setting in community agency, education, museum, or arts venue, or business. Students meet on regular basis with instructor and provide periodic written reports of their experience. May require analytic essay, as deter-mined by supervising faculty member. May be repeat-ed for credit. Individual contract with supervising fac-ulty member required. P/NP grading.

195CE. Community and Corporate Internships in English. (4) Tutorial, to be arranged. Limited to juniors/seniors. Individual internship in supervised setting in community agency, education, museum, or arts venue, or business. Students meet on regular basis with instructor and provide periodic written reports of their experience. May require analytic essay, as deter-mined by supervising faculty member. May be repeat-ed for credit. Individual contract with supervising fac-ulty member required. P/NP grading.

197. Individual Studies in English. (2 to 5) Tutorial, four hours. Limited to juniors/seniors. Individual inten-sive study, with scheduled meetings to be arranged between faculty member and student. Assigned reading and tangible evidence of mastery of subject mat-ter required. May be repeated for credit. Individual contract required. P/NP or letter grading.


199. Directed Research or Senior Project in English. (2 to 5) Tutorial, to be arranged. Limited to ju-niors/seniors. Supervised independent literary research and creative projects under guidance of faculty men-tor. Cumulating paper or project required. May be re-peated 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-Socratics to Descartes, including classical literary criticism (Plato, Aristotle, Horace, Longinus), biblical hermeneutics (Bible, Midrash, St. Paul, St. Augustine, St. Thomas Aquinas), and medieval and Renaissance theories of interpretation (Dante, Boccaccio, Sidney). S/U or letter grading.

201B. Aesthetics and Criticism from Enlightenment to Decadence. (4) Lecture, three hours. Continuation of course 201A, proceeding from neoclassical and Enlightenment critical theory through Victorian and decadent aesthetic and literary criticism. Readings may include texts by Rousseau, Dryden, Pope, Hume, Kant, Schiller, the Schlegels, Coleridge, Hegel, Schelling, Arnold, Pater, Wilde, and Nietzsche. S/U or letter grading.

201C. Developments and Issues in Modern Critical Thought. (4) Lecture, three hours. Study of major figures and ideas in modern and contemporary critical theory. Readings vary from year to year but may include such authors as Freud, Lacan, Burke, Popper, Horkheimer, 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 not required. Practice in writing and using computer programs for analysis of literary style, content, and authorship. May be repeated for credit. S/U or letter grading.

204. History of Rhetoric. (4) Lecture, four hours. Reading of basic texts in history of rhetoric and selection from standard commentaries. Survey of classical period and medieval-to-modern period in alternate years. S/U or letter grading.

M205A. Study of 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 value of oral composition, and modern-day electronic media and popular verbal genres, such as joking and rapping. S/U or letter grading.

M205B. Collecting Oral Tradition. (4) (Same as Scandinavian M272.) Seminar, three hours. Description and evaluation of various modern approaches to collecting and documenting oral tradition as text, performance, and 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 and of 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, its vocabulary, literature, and social and cultural environment, with translation of passages from Old English literature. S/U or letter grading.

212. Middle English. (4) Lecture, four hours. Requi- site: course 211. Detailed study of linguistic aspects of Middle English literature, with emphasis on examples of better prose and poetry. S/U or letter grading.


M215. Paleography of Latin and Vernacular Manu- scripts, 900 to 1500. (4) (Same as Classics M218, French M210, and History M218.) Lecture, three hours. Examination of history of Latin and vernacular manuscript book as witness to changing society that produced it. Focus on relationship between Latin manuscripts and vernacular manuscripts in 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 specified genre (poetry, fiction, or drama). May be repeated but may not satisfy more than one of nine courses required for first qualifying examina- tion nor any of five courses required for second qualifi- cation. S/U or letter grading.


240. Studies in History of English Language. (4) Lecture, four hours. Individual seminars dealing with any single historical period (medieval, modern, or English language; 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. In- dividual seminars dealing with one historical period (medieval and Renaissance, Middle English, or 19th century and modern), specific authors, or contribu- tions 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 of prose and poetry 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 repeat- ed for credit. S/U or letter grading.

246. Renaissance Literature. (4) Lecture, four hours. Studies in poetry and prose of Renaissance English literature, exclusive of Shakespeare; limits of investi- gation set by individual instructor. May be repeated for credit. S/U or letter grading.

247. Shakespeare. (4) Lecture, three hours. May be repeated for credit. S/U or letter grading.


250. Restoration and 18th-Century Literature. (4) Lecture, three hours. Studies in English poetry and prose, 1660 to 1800; limits of investigation set by individ- ual instructor. May be repeated for credit. S/U or letter grading.

251. Romantic Writers. (4) Lecture, three hours. May be repeated for credit. S/U or letter grading.

252. Victorian Literature. (4) Lecture, three hours. Studies in English poetry and prose of Victorian peri- od; 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.


256. Studies in Drama. (4) Lecture, three hours. Studies in drama as genre from its beginning to pres- ent; 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. Stud- ies 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.


M260A. Topics in Asian American Literature. (4) (Same as Asian American Studies M280D.) 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/Chica- no literature and culture. Examination of political, aesthetic, economic, and cultural context that emerg- es in Chicana/Chicano discourse; limits of investi- gation set by individual instructor. May be repeated for credit. S/U or letter grading.


263. Celtic Literature. (4) Lecture, three hours. Preparation: knowledge of one ancient or modern Celtic language. Studies in poetry and prose of early and modern Celtic literatures, chiefly Irish and Welsh; limits of investigation set by individual instructor. May be repeated for credit. S/U or letter grading.
M226. 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 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.


M298. Interdisciplinary Studies in 17th and 18th Centuries. (4) (Same as History M298) Discussion, four hours. Topics vary according to participating faculty. May be repeated for credit. S/U or letter grading.

M299. Interdisciplinary American Studies. (6) (Same as History M298) Discussion, four hours. Readings, 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 not be substituted for any departmental requirement. May be repeated for credit. S/U grading.

495A. Supervised Teaching Preparation. (2) Seminar, two hours. Required of all applicants for teaching assistantships in English. Introduction to teaching of literature intended to prepare teaching assistants for their first assignments in leading discussion sections. Practical concerns of creating assignments, grading papers, and holding conferences. S/U grading.

495B. Supervised Teaching Preparation. (2) Seminar, two hours. Required of all teaching assistants in their initial quarter of teaching. Mentoring and group teaching assistant/mentor conferences. S/U grading.

495E. Teaching with Technology. (2 to 4) Seminar, two hours. Enables graduate student instructors to approach challenges of teaching with technology on two fronts: by familiarizing them with range of possible applications and by carrying out research project on technology topic of their choice. S/U grading.

496. Publishing Academic Literary Articles. (4) Discussion, four hours. Structured as writing workshop and divided into two parts: (1) determination of what publishable article looks like while students revise work independently and (2) circulation of student papers to class in advance with writing discussed in seminar room by whole class. 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 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.


598. M.A. Research and Thesis Preparation. (4 or 8) Tutorial, to be arranged. Limited to graduate students. May not be applied toward any course requirement for degree. S/U grading.

599. Ph.D. Dissertation Research. (4 or 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.

ENGLISH COMPOSITION
See Writing Programs

ENVIRONMENTAL HEALTH SCIENCES
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Professors
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Michael D. Collins, Ph.D.
Jared M. Diamond, Ph.D.
Curtis D. Eckert, Ph.D.
Hilary A. Godwin, Ph.D.
Oliver Hankinson, Ph.D.
Richard J. Jackson, M.D., M.P.H.
Andrè E. Neil, M.B.Ch.B., Ph.D.
Shane S. Que Hee, Ph.D.
Beate R. Ritz, M.D., Ph.D.
Wendie A. Robbins, R.N., Ph.D., FAAN
Linda Rosenstock, M.D., M.P.H.
Robert H. Schievels, Ph.D.
Irwin H. Suffet, Ph.D.

Professors Emeriti
Arthur K. Cho, Ph.D.
Climis A. Davos, Ph.D.
John R. Friberg, Ph.D.
William C. Hinds, Sc.D.
Robert A. Mah, Ph.D.
Arthur M. Winer, Ph.D.

Associate Professors
Jane L. Valentine, Ph.D.
Yifang Zhu, Ph.D.

Assistant Professor
Patrick Allard, Ph.D.
Adjunct Professor
Thomas H. Hatfield, Dr.P.H., REHS
Adjunct Assistant Professors
Angelo J. Bellomo, M.S.
Brian L. Cole, Dr.P.H.
James H. Gibson, Ph.D., M.P.H., REHS

Scope and Objectives
The Department of Environmental Health Sciences focuses its research and educational activities on the protection of human health from biological, chemical, and physical hazards in the environment. Its graduates are scientists, professionals, and leaders capable of identifying and measuring agents of environmental concern; evaluating the health, environmental, and all other impacts of such agents; developing means for their effective management; and evaluating alternative policies directed at improving and protecting environments. Such training is accomplished through several degree programs that offer specialized study in selected academic areas of environmental health sciences such as air pollution, environmental chemistry, environmental management, toxicology, built environment and health, industrial hygiene, and water quality. Graduates of the department pursue careers in the private or public sector as researchers, educators, managers, policymakers, and/or practitioners.

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). 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://grad.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 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 course each in chemistry and biology. Introduces to environmental health, including coverage of sanitary principles and chronic and acute health effects of environmental contaminants. P/NP or letter grading.
101. Fundamentals of Chemistry in Environmental Health. (2) Seminar, one hour; discussion, one hour. Designed for undergraduate students in Public Health minor or master's and doctoral students in Fielding School of Public Health. Ideal for students who feel that their background in chemistry is not strong enough and who planning to take course 100, C200A, C200B, or C200C or are concurrently enrolled in one of those courses. Interactive seminar with focus on critical concepts in chemistry that students need for core environmental health sciences courses. P/NP, S/U, or letter grading.

C125. Atmospheric Transport and Transformations of Airborne Chemicals. (4) Lecture, four hours. Preparation: one year of calculus, one course each in physics, calculus, and physical chemistry. Designed for science, engineering, and public health students. Role of regional or long-range transport, and atmospheric lifetimes and fates of airborne chemicals in phenomena such as photochemistry, smog, acid deposition, stratospheric ozone depletion, accumulation of greenhouse gases, and regional and global distribution of volatile toxic compounds. Concurrently scheduled with course C225. P/NP or letter grading.

C135. Environmental Policy for Science and Engineering. (4) Lecture, four hours. Limited to senior undergraduate and graduate students. Examination of theoretical and historical aspects, legal, ethical, environmental, regulatory policy, as well as practical issues involved in implementing and enforcing each. Exploration of selection and impact of regulatory forms from variety of disciplines and viewpoints. Focus on traditional command and control regulation (including self-executing performance standards and permitting), market-based regulation (such as emissions trading), renewable energy, and emerging regulatory approaches such as management-based regulation and alternatives assessment. Issues of compliance and enforcement. Concurrently scheduled with course C235. P/NP or letter grading.

C140. Fundamentals of Toxicology. (4) Lecture, four hours. Preparation: one course each in biology, organic chemistry, and biochemistry. Essential aspects of toxicology, with emphasis on human species. Absorption, distribution, excretion, biotransformation, as well as basic toxicologic processes and organ systems. Concurrently scheduled with course C240. Letter grading.

C152D. Properties and Measurement of Airborne Particles. (4) Lecture, four hours. Preparation: one year each of chemistry, physics, and calculus. Basic theory and application of aerosol science to environmental health sciences, including behavior, sampling, and measurement of aerosols and quantitative problems. Concurrently scheduled with course C252D. P/NP or letter grading.

C157. Risk Assessment and Standard Setting. (4) Seminar, four hours. Requisites: course C140, Epidemiology 100. Designed to provide students with opportunity to review scientific basis for association of disease endpoints and other factors. Analysis of each factor and related problems that environmental health practitioners face today, conducted as series of lectures, assignments, hands-on field exercises, and group projects, to help students develop skills needed to understand concepts across boundaries in field of environmental health. May satisfy some requirements needed to qualify for Registered Environmental Health Specialist (REHS) certification. S/U or letter grading.


104. Seminar: Exposure Assessment. (2) Seminar, two hours. Discussion of various topics in exposure assessment. Topics may vary by term and include aspects of occupational health sciences, environmental health sciences, and multimedia sources of exposure. S/U grading.

205. Environmental Health Sciences Doctoral Seminar. (2) Seminar, two hours. Limited to environ- mental 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 Sys- tems. (4) Lecture, two hours; laboratory, two hours. Introduction to geographic information systems (GIS), including use of GIS software, mapping, processing, and analysis, S/U or letter grading.

208. Built Environment and Health. (4) Lecture, three hours; discussion, one hour. Limited to public health and urban planning graduate students. Inter- disciplinary course on built environment and health and breaking down silos. U.S. and other developed, as well as developing countries, are facing increasing exposure to the built environment decisions. While hazards presented by air and water pollution are well recognized for acute, infectious, and toxicologic illnesses, there is increasing recognition of hazards presented by building and community design that fail to recognize human health. Land use and built environment decisions impact every age group and social 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, insurance, housing, 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, hands-on field exercises, and group projects, to help students develop skills needed to understand 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.


214. Children’s Environmental Health: Prenatal and Postnatal. (4) Lecture, four hours. Preparation: one year of physics, one course each in biology, chemistry, and molecular biology. Examination of how environmental exposures to chemical, physical, and biological agents during period of maturation (from fertilization to adulthood) cause pathophysiologic perturbations in homeostasis at any stage during development. M220. Laboratory Literacy for Public Health Professionals. (4) Same as Epidemiology M225.) Lecture, two hours; laboratory, four hours. Preparation: introductory microbiology. Requisites: Epidemiology 200A, 200B, and 200C (or 100), Designed to enable public health professionals with no laboratory knowledge to understand vocabulary and technologies of public health laboratories. Sample laboratory reports provided for discussion of implications for public health program actions. S/U or letter grading.

C225. Atmospheric Transport and Transformations of Airborne Chemicals. (4) Lecture, four hours. Preparation: one year of calculus, one course each in physics, organic chemistry, and physical chemistry. Designed for science, engineering, and public health students. Role of regional or long-range transport, and atmospheric lifetimes and fates of airborne chemicals in phenomena such as photochemical smog, acid deposition, stratospheric ozone depletion, accumulation of greenhouse gases, and regional and global climate change. Suitable for toxicologists interested in human implications. Letter grading.

C252D. Properties and Measurement of Airborne Particles. (4) Lecture, three hours per week, one each year of chemistry, physics, and calculus. 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 C125. S/U or letter grading.

C252E. Industrial Hygiene Practice. (2) Seminar, two hours. Requisites: courses C200A, C200B. Presentation of methods and principles of occupational health. Topics include discussions of regulatory framework, risk assessment and risk communication, new legislation, and emerging occupational health issues. Letter grading.


C252F. Industrial Hygiene Measurements Laboratory. (3) Laboratory, three hours. Corequisites: courses C252D, C252E. Limited to industrial hygiene majors. Laboratory methods for sampling, measurement, and analysis of gases, vapors, and aerosols found in occupational environment. S/U or letter grading.

C252G. Industrial and Environmental Hygiene Assessment. (4) Lecture, one hour; discussion, two hours; laboratory, two hours; outside study, four hours. Requisites: courses C200A, C200B, C252D, C252E, C252F. Environmental and industrial hygiene sampling and measurement via walk-through and surveys, group discussion, actual field measurement, laboratory, and analyses and reports, with emphasis on chemical, physical, and ergonomic hazards. Letter grading.

C253. Basic Principles of Nanobiological Interactions. (2 to 4) Lecture, two hours; laboratory, two hours. Preparation: one year of physics, mathematics, 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 exhaust ventilation, air cleaning equipment, and respiratory protection. S/U or letter grading.

256. Biological and Health Surveillance Monitoring in Occupations with Harsh Environments. (4) Lecture, three hours; discussion, one hour; assignments, three hours. Principles and applications of control technology to industrial environments, including exposure assessment and environmental monitoring and inorganic and organic chemicals and physical factors. Letter grading.

C257. Risk Assessment and Standard Setting. (4) Seminar, four hours. Requisites: courses C240, C251. Epidemiology 100. Designed to provide students with opportunity to review scientific basis for association of selected occupational and environmental exposures with disease. Special emphasis on critical evaluation of methodologies specifically to interface of science and regulatory standards. Concurrently scheduled with course C157. S/U or letter grading.

258. Identification and Analysis of Hazardous Wastes. (4) Lecture, three hours; discussion, one hour. Preparation: one course in chemistry, one introductory course in environmental science. Requisites: course 252E, 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.

C259. Occupational Safety and Ergonomics. (4) Lecture, four hours. Overview of most frequent and severe occupational injuries and illnesses, their distribution, causes, analysis methods, and control approaches, including low back pain, falls, machine exposures, upper extremity musculoskeletal disorders, fleet safety, and selected ergonomics topics. Letter grading.

C259C. Seminar Series: Occupational Ergonomics. (2) Seminar, two hours. Requisite: course 259A. Emphasis on research methodology as applied to prevention and control of musculoskeletal disorders. Topics include applied anthropometry, biomechanical modeling, strength measurement, postural analysis, fatigue, and medical surveillance of cumulative trauma disorders. Letter grading.

C259G. Fire Prevention, Protection, and Facility Design. (3) Lecture, three hours. Requisite: course 259A. Introduction to application of fire sciences, engineering, and management principles to prevention, suppression, and control of fires and explosions and protection of persons and property from fire or explosion damage and injury. Letter grading.


M270. Work and Health. (4) 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. Examination 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 Berkeley. Laboratory introduction to undergraduate ideas at undergraduate levels in physical, or natural sciences. Introduction to commonly used vocabulary in nanoscience required to appreciate bio- logical 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 and toxicological properties of engineered nanomaterials to their potential...
for transport, reactivity, uptake, and toxicity in natural environments and in body. Concurrently scheduled with course C180.

296A-296N. Research Topics in Environmental Health Sciences. (2 each) Seminar, two hours. Advanced study and analysis of current topics in environmental health sciences. Discussion of current research and literature in research specialty of faculty member teaching course. S/U grading.

296A. Coastal Ecological Processes and Problems
296B. Teratogenesis
296C. Toxicology and Environmental Health Policy
296D. Economic Impacts of Contamination and Remediation of Coastal Waters
296E. Molecular Topics in Boron Biology
296F. Toxicology and Exposure Assessment of Toxic Chemicals
296G. Advances in Aerosol Technology
296H. Occupational and Environmental Exposure Assessment
296I. Industrial and Environmental Hygiene
296J. Germ Cell Cytogenetic/Genetic Biomarkers
296K. Aquatic Chemistry
296L. Water Science and Health
296M. Experimental and Modeling Studies of Atmospheric Pollution
296N. Genetic Toxicology

375. Teaching Apprentice Practicum. (1 to 4) Seminar, to be arranged. Preparation: apprentice personnel employment as teaching assistant, associate, or fellow. Teaching apprenticeship under active guidance and supervision of regular faculty member responsible for curriculum and instruction at UCLA. May be repeated for credit. S/U grading.

400. Field Studies in Environmental Health Sciences. (2 or 4) Field work, to be arranged. Field observation and studies in selected community environmental health organizations. Students must file field program and training documentation on form available from Student Affairs Office. May not be applied toward M.S. minimum course requirement; 4 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, Chemistry 20A, 30AL. Instrumental methods for laboratory and field applications to assess 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, infectious diseases, public health microbiology, or public health laboratory course. Designed for master's and doctoral students. Principles of operations and management of public health laboratories and roles they 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. Students perform needs assessment for local public health laboratory. S/U or letter 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 Environmental Health Sciences. (4) Lecture, one hour; discussion, one hour; laboratory, four hours; other, two hours. Preparation: one year each of physics, chemistry, and mathematics. Requisites: courses C200A, C200B. Laboratory techniques and instrumentation used in preparation and analysis of biological, environmental, and occupational samples. Letter grading.

411. Environmental Health Sciences Seminar. (2) (Formerly numbered M411.) Seminar, two hours. Required for graduate environmental health sciences students for one term each year. Current topics in environmental health in science, policy, and leadership. Speakers who are leading thinkers at interface of health and environment address important subjects of environmental health. May be repeated for credit. S/U grading.

M412. Effective Technical Writing. (2) Same as Environmental M412.) Lecture, one hour. Essentials of grammar, punctuation, syntax, organization, and formatting needed to produce well-written journal articles, research reports, memoranda, letters, and resumes. Emphasis on accuracy, clarity, conciseness, and avoidance of common errors in advanced technical writing, using critique, exercises, and examples. S/U grading.

454. Health Hazards of Industrial Processes. (4) Lecture, two hours; field trips, four hours. Requisites: course 255. Industrial processes and operations and occupational health hazards that arise from them. Letter grading.

461. Water Quality and Health. (4) Lecture, three hours; discussion, one hour. Requisites: courses C200A, C200B, 401. Introduction to water quality, with coverage of hydrology, water chemistry, and various chemical contaminants that may affect human health. Various treatment methods and health implications. S/U or letter grading.

470. Environmental Hygiene Practices. (2) Lecture, two hours. Requisites: courses C200A, C200B, 401, Epidemiology 100. Field principles and practices of environmental sanitation as applicable 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 Movements, 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 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, visiting 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.

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 8) Tutorial, to be arranged. Limited to graduate students. May not be applied toward any degree course requirement. May be repeated for credit. S/U grading.

598. Master's Thesis Research. (2 to 10) Tutorial, four hours. 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 10) Tutorial, four hours. May not be applied toward any degree course requirements. May be repeated for credit. S/U grading.
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, 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://grad.ucla.edu/gasaslibrary/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 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, two hours; preparation: one full biological sciences course. Not open to credit for students with credit for course 200A, 200B, or 200C. Introduction to epidemiology, including factors governing health and disease in populations. Letter grading.

101B. Design, testing, field use, and administration of data collection instruments, with particular emphasis on questionnaires. Letter grading.

200A. Methods I: Basic Concepts and Study Designs. (8) Lecture, six hours; discussion, four hours. Enforced prerequisite 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 prerequisite: 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, problem designs, issue analysis, and confirmation. 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). Requires: 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 M209b.) 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. Letter grading.

M218. Questionnaire Design and Administration. (4) (Same as Community Health Sciences M218.) Lecture, four hours. Requires: 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 questionnaires. Letter grading.

220. Principles of Infectious Disease Epidemiology. (4) Lecture, three hours. Requires: course 100 or 200A. Ascertainment of infection, transmission, and epidemiological parameters rather than clinical and pathological aspects. Specific diseases discussed in depth to illustrate epidemiologic principles. S/U or letter grading.

222. Arthropods as Vectors of Human Diseases. (4) Lecture, four hours. Requires: courses 200A, 200B, and 200C (or 100), 220. Comprehensive overview of morphology, systematics, natural history, host/vector/pathogen 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 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 from animals to humans, and methods for their prevention and control. Letter grading.

M225. Laboratory Literacy for Public Health Professionals. (4) (Same as Environmental Health Sciences M225.) Lecture, two hours; laboratory, four hours. Preparation: introductory microbiology. Requires: courses 200A, 200B, and 200C (or 100). Designed to enable public health professionals with no laboratory knowledge to understand vocabulary and technologies of public health laboratories. Sample laboratory reports provided for discussion of implications for public health program actions. S/U or letter grading.

M226. Global Health Measures for Biological Emergencies. (4) (Same as Ecology and Evolutionary Biology M226.) Lecture, four hours. Requires: course 220. Mitigation of bioterrorism falls outside traditional public health programs and public health graduate
education. Because of seriousness of such threats, it is important that individuals trained in public health understand problems and responses. Letter grading.


229. Epidemiology of Foodborne Illnesses. (4) Lecture, four hours. Requisites: courses 200A, 200B, and 200C (or 100). Biostatistics 100A. Food poisoning is significant cause of morbidity and mortality, 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.

230. Epidemiology of Sexually Transmitted Diseases. (4) Lecture, four hours. Requisites: courses 200A, 200B, and 200C (or 100). Sexually transmitted diseases; medical/biological aspects, epidemiology and control in developed and developing countries. S/U or letter grading.


232. Methods in STI/HIV 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 reproductive 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, 200B, and 200C (or 100). Overview of communicable disease epidemiology program, and research issues specific to correctional population in U.S., including factors that contribute to transmission of communicable pathogens such as mental health, homelessness, lack of 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, magnitude of risk factors, strategies for prevention, lipoprotein metabolism, and epidemiology of diabetes, hypertension, and chronic heart failure. Letter grading.


243. Acute Traumatic and Chronic Repetitive Injuries from Work-Related Exposures. (2) Lecture, two hours; discussion, one hour. Requisites: course 100, Biostatistics 100A. Lectures and discussions on magnitude, scope, research, and intervention strategies for work-related acute traumatic and chronic repetitive (musculoskeletal) injuries. Emphasis on injury research methods for all external causes of injury, utilizing epidemiologic methods to identify risk factors and identify injury prevention. S/U or letter grading.


247. Epidemiology of Injuries in Elderly. (2) Lecture, two hours. Description of frequency of risk factors for, and possibilities of preventing injuries in elderly populations. Comparison of injury outcomes (morbidity and mortality) 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, with principal focus on genetic study of complex diseases, determining genetic contributions to disease, identifying genes, and characterizing their main effects and interactions with environmental factors. S/U or letter grading.

250. Epidemiology of Infectious Injuries. (4) Lecture, four hours. Requisites: courses 200A, 200B, and 200C (or 100). Biostatistics 100A. Pertinent epidemiology methods for study of non-intentional trauma, including that from motor vehicle crashes, occupationally related and other injuries. Major external causes, that focus on research approaches, data sources, analytical techniques. Substantive findings on related subproblem areas presented for critical review. Letter grading.

251. Environmental Epidemiology of Injuries. (2) Lecture, two hours. Requisites: courses 200A, 200B, and 200C (or 100). Discussion of environmental epidemiology of injury: methods of analyzing, and interpreting data related to nutrition and health outcomes. S/U or letter grading.

252. Epidemiologic Methods in Violent Injury. (4) Formerly numbered 252.) (Same as Environmental Health Sciences M211.) Lecture, four hours. Requisites: courses 200A, 200B, and 200C (or 100). Description and critical evaluation of epidemiologic methods in approaches to understanding incidence risk factors and prevention strategies of violence and violence-related injury. Letter grading.

253. Acute Traumatic and Chronic Repetitive Injuries from Work-Related Exposures. (2) Lecture, two hours; discussion, one hour. Requisites: course 100, Biostatistics 100A. Lectures and discussions on magnitude, scope, research, and intervention strategies for work-related acute traumatic and chronic repetitive (musculoskeletal) injuries. Emphasis on injury research methods for all external causes of injury, utilizing epidemiologic methods to identify risk factors and identify injury prevention. 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 methods, ranging from food-borne outbreak investigation to evidence-based regulatory assessment of health claims for foods. Experience in actual world of collecting, analyzing, and interpreting data related to 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. Injuries have increased leading killer of U.S. children in last two decades. Children have specific risk factors for injuries, many of which are preventable. Presentation of approaches to research and prevention of pediatric injuries. Letter grading.


M258. Molecular Nutrition and Epidemiology of Obesity and Diabetes. (4) (Formerly numbered 258.) (Same as Pathology M258.) Lecture, four hours. Preparation: basic biochemistry, epidemiology, molecular biology, physiology, and statistics courses. Study of entire landscape of nutritional, biochemical, and genetic aspects of obesity and diabetes and their micro vascular and macro vascular 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 study students learn process of generating etiologic hypotheses that can be tested using modern molecular epidemiologic methods. Techniques and principals 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.

259. Disaster Epidemiology. (2) Lecture, two hours. Requisites: courses 200A, 200B, and 200C (or 100), Community Health Sciences 295. Introduction to epidemiologic methods for study of acute and chronic health outcomes, including surveillance, 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 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, two hours. Requisites: courses 200A, 200B, and 200C (or 100). Methodologic considerations, approaches, and limitations in epidemiologic studies of occupational groups and environments. S/U or letter grading.

262. Seminar: Environmental and Occupational Cancer Epidemiology. (2) Seminar, two hours. Requisites: courses 200A, 200B, and 200C (or 100). Discussion of examples of recent epidemiologic studies, with focus on environmental and occupational exposures, especially in areas where controversies have arisen such as for electromagnetic fields and childhood leukemia, and bladder cancer and trichlo-roethane levels of drinking water. S/U or letter grading.
263. Exposure Assessment in Occupational and Environmental Epidemiology. (2) Lecture, two hours. Requisites: Biostatistics 200A, 200B, and 200C (or 100). Exposure assessment is often most challenging aspect of epidemiologic studies of occupational and environmental hazards. Focus on integration of industrial hygiene principles and epidemiologic methods to improve exposure assessment methods and exposure analyses for occupational/environmental health studies. S/U or letter grading.

265. Epidemiologic Methods in Occupational and Environmental Epidemiology. (2) Lecture, two hours. Introduction to epidemiologic methods applied to evaluation of human health consequences of occupational and environmental hazards, including design study, exposure assessment, and statistical techniques commonly encountered in research focused on assessing adverse health effects resulting from occupational and environmental exposures. Topics include clusters, meta-analysis, risk assessment, and policy development. Illustrated by case studies, with focus on techniques to critically evaluate and interpret current literature. Letter grading.

266. Global Health and Tropical Medicine. (4) Lecture, four hours. Introduction to tropical diseases and global health. How humanitarian health issues, maternal-child health, research in tropics, World Health Organizations, and political/medical constraints all are related to respect to health on worldwide scale. Letter grading.

267. Methodologic Issues in Reproductive Epidemiology. (2) Seminar, two hours. General discussion of methodologic issues important to epidemiologic studies of reproductive outcomes, fetal growth, low birth weight, prematurity, birth defects, pregnancy loss, 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 Neuropharmacology. (2) Lecture, two hours. Requisites: courses 200A, 200B, 200C. Neuropharmacology is application of epidemiologic knowledge, reasoning, and methods to study effects and uses of drugs. Survey of contemporary roles of neuropharmacology 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. (4) Lecture, four hours. Requisite: course 100 or 200A. Introduction to range of different methodologies used to collect data and conduct analyses on behaviors studied in epide- miologic research. Emphasis on collecting, analyzing, and interpreting data on behaviors that can be associated with disease outcomes, including methods to collect survey data (i.e., design of questionnaires, interviewing techniques, use of technology to collect data) and methods to collect and analyze qualitative data (e.g., ethnographic interviews, focus groups, systematic observations). Overview on epidemiology of key behavioral factors affecting human health, including sexual risk behaviors, substance use, physical activity, and healthcare utilization. S/U or letter grading.

271. Assessing Validity of Complementary and Alternative Healthcare Procedures. (2) Lecture, two hours. Exploration of validity of alternative and complementary healthcare procedures, with special emphasis on 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. Topics may include acupuncture, chiropractic, manipulation, massage, and herbal remedies. Letter grading.

M272. Social Epidemiology. (4) (Same as Community Health Sciences M272.) Lecture, two hours, discussion, one hour. Requisite: course 100. Relations between sociological, cultural, and psychosocial factors in etiology, occurrence, and distribution of morbidity and mortality. Emphasis on lifestyles and other socioeconomic factors associated with general susceptibility to disease and subsequent mortality. Topics include clusters, meta-analysis, risk assessment, and statistical methodology commonly encountered in research focused on assessing adverse health effects resulting from occupational and environmental exposures. Topics include clusters, meta-analysis, risk assessment, and policy development. Illustrated by case studies, with focus on techniques to critically evaluate and interpret current literature. 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 controversies, and research ethics related to human subjects research. Focus on professional responsibility, ethical dilemmas in research, and personal and institutional obligations of research professionals. S/U or letter grading.

274. Topics in Chronology. (2) Lecture, two hours. Introduction to basic concepts and principles of chronology and how they relate to chronic disease epidemiology. Circadian disruption and sleep, biomarkers of circadian system, and design, as well as methods to study these principles in modern epidemiology, with emphasis on biologic aspects and relevant disease mechanisms. S/U or letter grading.

280. Connective Tissue, Musculoskeletal, and Musculoskeletal Studies. (4) Lecture, four hours. Requisites: courses 200A, 200B, 200C, 220. To deepen and further integrate knowledge and understanding of human health. Emphasis on small group and individual research on small number of them to enable in-depth study. Each to be presented and discussed from three viewpoints that facilitate greater understanding: epidemiology, immunology, and genetic and molecular basis, and epidemiologic and mathematical analysis. Letter grading.

291. Seminar: Special Topics in Epidemiology. (2) Seminar, two hours. Requisites: courses 200A, 200B, and 200C (or 100). Review of current epidemiologic research that is contained in recent medical literature. May be repeated for credit. S/U or letter grading.


294. Epidemiology and Policy of Occupational and Environmental Health Issues. (2) Seminar, two hours. Requisites: courses 200A, 200B, and 200C (or 100). Introduction of basic concepts of cancer epidemiology and review of current epidemiological research in cancer in recent medical and epidemiologic literature. May be repeated for credit. S/U or letter grading.


297. Topics in Population Genetics and Nutrition. (2) Seminar, three hours. Preparation: basic courses in biostatistics. Two-hour seminar on topics in modern nutritional epidemiology. Topics include topics such as the role of nutrition in the development and prevention of chronic diseases, the role of nutrition in population health, and the role of nutrition in public health policy. S/U or letter grading.

400. Field Studies in Epidemiology, (2 or 4) Fieldwork, to be arranged. Field observation and studies in international 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.S. minimum course requirement; 4 units may be applied toward M.A. minimum required for M.P.H. degree. Letter grading.


M403. Computer Management and Analysis of Health Data Using SAS. (4) Lecture, two hours; laboratory, two hours. Requisites: Biostatistics 100A, 100B (100B may be taken concurrently). Introduction to practical issues in managing and analyzing 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, addressing with medical and health-related hypotheses. Letter grading.

404. Advanced SAS Techniques for Management and Analysis of Epidemiologic Data. (2) Lecture, three hours. Requisites: course M403 or 410. Hands-on experience with SAS 9.2/9.3, with focus on using SAS data and PROC steps efficiently to manage, clean, analyze, and tabulate epidemiologic data from data collection systems and solutions in data management, including lack of documentation, data definitions, unique subject identifiers, and nonstandard data formats. S/U or letter grading.

M406. Preparing for Smallpox or Other Bioterrorist Events. (2) (Same as Community Health Sciences M406.) Lecture, two hours. Major current public health issue is massive effort to prepare for possible bioterrorist events. Practical application of principles of epidemiology and public health in preparing for bioterrorism. Letter grading.

410. Management of Epidemiologic Data. (2) Lecture, two hours. Data management for various epidemiologic study designs, confidentiality concerns; data management systems and their interaction to mainframe computer. 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 and data 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). Biostatistics 100A. Overview of public health surveillance methodology, including (1) design, implementation, and evaluation of surveillance systems, (2) analysis and interpretation of surveillance data, and (3) application of surveillance methods to specific health-related outcomes. 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 impact of consent process. S/U or letter grading.

414. Practical Epidemiologic Investigations. (2) Lecture, one or two hours; laboratory, one or two hours. Requisites: courses 200A, 200B, and 200C (or 100). Practical application of epidemiologic 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 (and/or 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 (and/or 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. Not may 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 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. No more than 8 units may be applied toward master's degree minimum total course requirement; may not be applied toward minimum graduate course requirement. S/U grading.

596. Directed Individual Study or Research. (2 to 8) Tutorial, to be arranged. Limited to graduate students. Individual guided studies under direct faculty supervision. Only 4 units may be applied toward M.P.H. and 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 musical art and practice relate to other aspects of culture, society, politics, and economics. Courses are also given 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 after students graduate.

The undergraduate major in Ethnomusicology is offered with two concentrations: one in jazz studies and one in world music with emphases in general world music, performance/composition, public ethnomusicology, and scholarly research. Admission requires 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 scoring, jazz performance, research, and teaching.

Beyond the core and emphasis requirements, students in the world music concentration may, through elective courses, prepare for a variety of career goals, including the study of ethnomusicology in graduate school, composing and performing music, working in the music industry, serving society in the nonprofit sector, or becoming a K through 12 music teacher.

At the graduate level, the department offers M.A. and Ph.D. degrees in Ethnomusicology, with a specialization in systematic musicology. Both degree programs train students for future university teaching careers, as well as careers in library science and archiving, the music industry, public service, and music technology. The department provides fellowships, teaching assistantships, and research assistantships for qualified students.

**Undergraduate Study**

The Ethnomusicology major is a designated capstone major. The capstone project is individualized to each student and requires a creative process either through music performance/composition, a research project, or an internship with a self-reflective journal detailing the process. Through that process, students are expected to demonstrate a broad knowledge base and competency in performance, writing, and/or composition and ability to apply
knowledge and experience to the specific requirements of the capstone; conceive and successfully complete a project that is expressive of their specific interests and acquired expertise; and display, through written documentation or live presentation, the requisite communication and, in some cases, teamwork required by work in this field.

**Ethnomusicology B.A. Capstone Major**

**Admission**

Applicants are reviewed individually, based on a questionnaire, grade-point average, two letters of recommendation, test scores, a personal statement of purpose, and an interview/audition. Applicants who are unable to travel to UCLA have the option of submitting a videotape of musical performance, following departmental guidelines.

**Preparation for the Major**

All entering freshmen are required to take the Music Theory Assessment Examination either during New Student Orientation or during zero week of Fall Quarter. The examination score is used to determine eligibility and placement in first-year music core courses (Ethnomusicology M7A, M7B, M7C and Music 20A, 20B, 20C). Examination results may require enrollment in Music 3 as a requisite to both Ethnomusicology M7A and Music 20A. Entering transfer students with fewer than 15 units of prior music theory must take the Music Theory Assessment Examination.

**Jazz Studies Concentration**

**Required:** Ethnomusicology M7A, M7B, M7C, with grades of C– or better, 20A and 20B, with grades of C or better, 12 units of instruction in jazz performance (course 71), and 12 units of ethnomusicology world music performance organizations and/or jazz performance ensembles (courses 91A through 91D).

**World Music Concentration**

**Required:** Ethnomusicology M7A, M7B, M7C, with grades of C– or better, 20A, 20B, 20C, with grades of C or better, Music 20A, 20B, 20C, with grades of C or better, 12 units of instruction in world music (course 121), and 12 units of ethnomusicology world music performance organizations and/or jazz performance ensembles (courses 91A through 91D).

**The Major**

**Jazz Studies Concentration — Performance Emphasis**

**Required:** Ethnomusicology M110A, M110B, M111, C122A, C122B, C122C, 127A, 127B, 127C, 129A, 129B, 129C, 133, 183, 183, 6 units of course 161T and/or 177, one 4-unit upper division elective course selected from ethnomusicology, music, or music education, 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, 133, 183, 183, 6 units of course 161T and/or 177, one 4-unit upper division elective course selected from ethnomusicology, music, or music education, 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.

**Emphasis (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 must complete the remaining four courses with other upper division ethnomusicology courses and/or upper division world music courses listed under this emphasis, with courses from other emphases, or with Ethnomusicology 188, 197E, or 197S courses.

**Performance/Composition (for students interested in performing and/or composing):** 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 may complete the remaining four courses with other upper division ethnomusicology courses and/or upper division world music courses listed under this emphasis, with courses from other emphases, or with Ethnomusicology 188, 197E, or 197S courses.

**Graduate Study**

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website, http://grad.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. (6) 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.
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M7A-M7B-M7C. Introduction to Music: History, Culture, Creativity. (4-4-4) (Same as Music M10A-M10B-M10C.) Lecture, two hours; laboratory, four 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 course. 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 music scholarship skills. Organized around broad ideas (performance, simultaneity, 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.

10A-10B-10C. World Music Theory and Musician- ship. (5-5-5) Lecture, two hours; discussion, four hours; laboratory, two hours; outside study, seven hours. Course 10A is requisite to 10B, which is requisite to 10C. Limited to Ethnomusicology and World Arts and Cultures majors. Introduction to and participation in 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 Life in Music. (4) Lecture, three hours. Impact of ethnicity, race, gender, and other social processes on American music in late 20th century; use of creativity in music to respond to and shape contemporary social processes. P/NP or letter grading.

20A-20B-20C. Musical Cultures of World. (5-5-5) Lecture, four hours; discussion, one hour; outside study, five hours. Requisite: Music 20C. Course 20A is requisite to 20B, which is requisite to 20C. Limited to Ethnomusicology majors. Study of Eastern world cultures, as well as selected world cultures through aural and written notations, vocal and instrumental skills, melodic and rhythmic dictation, improvisation, and composition. 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 core issues. P/NP or letter grading.

35. Blues, Society, and American Culture. (5) Lecture, four hours; discussion, one hour. Sociocultural history and survey of blues music tradition from its roots in West Africa to its emergence in African American oral culture, with emphasis on philosophical undertakings 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 world, covering music and ritual of Hinduism, Buddhism, Judaism, Christianity, Islam, and Native American spiritual practices. Exploration of Native Americans and syncretic religious practices in America such as African American gospel music, Brazilian Candomble, Cuban Santeria, and Haitian voodoo. Letter grading. P/NP or 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 the most prominent songs that distinctively 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 compositional/performative techniques and approaches that distinguished different sub-styles of jazz from one another, as well as how key historical figures that shaped development of jazz from its early years through modern jazz. Important historical social issues (segregation, Depression, World War II, Civil Rights Movement) that intersect with history of U.S. and jazz music. P/NP or letter grading. 50A. Late 19th Century through 1940s; 50B. 1940s to Present.

60. J.S. Bach in His World and Ours. (5) Lecture, four hours; discussion, one hour. Examination of life and music of J.S. Bach in historical and cultural context of his time. Introduction to musical techniques present, including changes in performance styles, scholarly studies, reception, and contemporary culture. P/NP or 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. Apprenticeship 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.

87. Special Courses in Music. (5) Same as Music 87B and Music History 87B. Lecture, four hours; discussion, four hours. Limited to undergraduate Ethnomusicology, Music, and Music History majors. Study and analysis of current and/or special topics in ethnomusicology, music, and music history taught by resident and visiting faculty members. May be repeated for credit with topic and instructor change. Letter grading.


92. Private Instruction in Music. (2) Studio, one hour. Limited to Ethnomusicology majors. Private or semiprivate music instruction with distinguished composers, performers, and producers and their impact on development of jazz. P/NP or letter grading.

M109A-109B. Music of Latin America. (5-5) Lecture, four hours; discussion, one hour. Course M109A is not requisite to 109B. Survey of traditional and contemporary musical culture. P/NP or letter grading. 109A. Mexico, Central America, and Caribbean Islands; 109B. Latin South America.

M110A-110B. African American Musical Heritage. (5-5) Same as Afro-American Studies CM112A.) Lecture, three hours. Historical and analytical examination of African American music covering Africa and its impact on America; music of 17th through 19th centuries; minstrelsy and its impact on repertories; African music in film, television, and轴传; impulse and rhythm of jazz, Emergence of blues music and its role in African American music in California. Concurrently scheduled with course CM112A. P/NP or letter grading.

111. Ellingtonia, (4) (Same as Afro-American Studies M114.) 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 the best examples among many black polyphonic music productions.

112. African American Music in CALIFORNIA. (4) (Same as Afro-American Studies CM112A.) Lecture, four hours. Historical and analytical examination of African American music covering Africa, its history, migration patterns, and urbanism to determine their impact on development of African American music in California. Concurrently scheduled with course CM112A. P/NP or letter grading.

113. Music of Brazil. (4) Lecture, three hours. History of ethnic and art music in Brazil, with some reference to Portuguese antecedents. P/NP or letter grading.

Upper Division Courses

C100. Audiovisual Archiving in 21st Century. (4) Seminar, three hours. Students from musicology 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 C200. P/NP or letter grading.

105. Music Business. (4) Lecture, four hours; outside study, eight hours. Designed for junior/senior Ethnomusicology, Musicology, Music, and Music History majors. Emphasis. How music industry functions and how products are created, marketed, and consumed. Basic information on production of recordings and legal issues faced by musicians, students, and scholars with use music in their work. P/NP or letter grading.


106B. Contemporary North American Indian Music. (4) Lecture, three hours; discussion, one hour. Contemporary Native American music musical expression, 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 American traditional music and its role in indigenous societies. Topics include relationship between speech and song, use of music by shamans, stories of creation, and use of indigenous music in creating nationalist and popular music styles. Letter grading.

M108A-108B. Music of Latin America. (5-5) Lecture, four hours; discussion, one hour. Historical and analytical examination of Latin American 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.


CM112. African American Music in California. (4) (Same as Afro-American Studies CM112A.) Lecture, four hours. Historical and analytical examination of African American music covering Africa, its history, migration patterns, and urbanism to determine their impact on development of African American music in California. Concurrently scheduled with course CM112A. P/NP or letter grading.

113. Music of Brazil. (4) Lecture, three hours. History of ethnic and art music in Brazil, with some reference to Portuguese antecedents. P/NP or letter grading.
M115. Musical Aesthetics in Los Angeles. (4) (Same as Chicana and Chicano Studies M115.) Lecture, three hours. Musical aesthetics. Historical perspective of art as intuition, examination on cross-cultural basis of diverse musical contexts within vast multicultural metropolis of Los Angeles, with focus on various musical networks and specific experiences of Chicano/Latino, African American, American Indian, Asian, rock culture, Western art music tradition, and commercial music industry. P/NP or letter grading.

M116. Chicana/Latino Music in U.S. (5) (Same as Chicana and Chicano Studies M116.) Lecture, four hours; discussion, one hour. Historical and analytical examination of musical expression of Latino peoples who have inhabited present geographical boundaries of U.S. P/NP or letter grading.

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 trends and 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 socio-cultural political and ideological grounds. Beyond. P/NP or letter grading.

M119. 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 ideological grounds, 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. In-depth analysis of jazz styles and related issues, with students working with music backgrounds. Concurrently scheduled with courses C222A-C222B-C222C. Letter grading. C122A. Early Jazz to Swing Era; C122B. Bebop to Avant-garde; C122C. Modernism and Beyond.

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.

C124. 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 importance that fueled his daring move from acoustic 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 Latin American. Concurrently scheduled with course C224. Letter grading.

125A-125B-125C. Jazz Composition and Arranging. (2-2-2) Lecture, two hours; outside study, four hours. While focusing on various aspects of jazz composition, differentiation between improvisation and notated composition, as well as between composition and arranging, and introduction to basic arranging concepts. Letter grading. 125A. Early Jazz to Swing Era; 125B. Bebop to Avant-garde; 125C. Jazz Since Sixties.

126A. Introduction to Jazz Arranging and Orchestration. (2) Seminar, two hours. Enforced requisite: course 129C. Study and practice of skills used in arranging and orchestration music in jazz idiom. Students create study of commenting and arranging of specific instruments and their unique application and use in jazz (jazz notation and terminology, transposition, windwood 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. Enforced requisites: courses 126A, 129A, and 129B. Continuing of concepts from course 126B, with focus on contributions of noteworthy arrangers/orchestras. Culminates with arrangements to be read by UCLA Jazz Orchestra I. Letter grading.

127A-127B-127C. Jazz Keyboard Harmony I, II, III. (2-2-2) Laboratory, two hours; outside study, four hours. Enforced requisites: courses 121B, 11C, and 129A. Course 127A is enforced requisite to 127B, which is enforced requisite to 127C. Not open for credit to students with credit for former course 127D. Study of jazz harmony through use of piano keyboard. Letter grading.

129A-129B-129C. Jazz Theory and Improvisation. (2-2-2) Lecture, four hours; outside study, eight hours. Elements of jazz theory and improvisation. Letter grading. 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.

M130. Culture of Jazz Aesthetics. (4) (Same as Anthropology M142R and World Arts and Cultures C150.) Lecture, four hours. Designed for Ethnomusicology, Music, and Cultural History majors. In-depth analysis of jazz styles and related issues, with students working with music backgrounds. Concurrently scheduled with course C255. Letter grading.

C132A. Introduction to various notational systems. Lecture, four hours; outside study, eight hours. Designed for Ethnomusicology, Music, and World History majors. In-depth analysis of jazz styles and related issues, with students working with music backgrounds. Concurrently scheduled with course C256A. Letter grading.

C133. European Musics: Politics, Identities, Nation-states. (4) Lecture, four hours; outside study, eight hours. Restricted to Ethnomusicology, Music, and World History majors. In-depth analysis of jazz styles and related issues, with students working with music backgrounds. Concurrently scheduled with course C256A. Letter grading.

M134. Music of Iran and Turkey. (4) Seminar, three hours. Limited to junior/senior Ethnomusicology majors. Comparative study of music of Iran and other related areas, including Turkey, with particular reference to their historical and cultural background, on sources on music theory and aesthetics, instruments, style, technique of improvisation, and contemporary practice. Concurrent participation in Near East performance ensemble (course 91N or 161N) required. Concurrently scheduled with course C240. Letter grading.


158A-158B-158C. Studies in Chinese Instrumental Music. (4-4-4) Lecture, three hours; laboratory, one hour. P/NP or letter grading. 158A. Study of literature, major sources, paleography, theory, and philosophy of Ch’inn, including transcription and analysis. 158B. Study of literature, major sources, paleography, theory, and philosophy of Pi’Pa, including transcription and analysis. 158C. Comprehensive survey of Chinese musical instruments, classification system, specific musical notation, and use in context of Chinese society.

C159. Music on China’s Periphery. (4) Lecture, four hours; outside study, four hours. Designed for undergraduate Ethnomusicology, Music, Music History, and World Arts and Cultures majors. Survey of music from China’s border regions and neighboring countries: technological and ideological issues related to traditional and modern styles from Mongolia, Uighurs of Xinjiang, Tibet, Tibe-to-Burman peoples, Hmong, and indigenous peoples of Taiwan. Concurrently scheduled with course C259. P/NP or letter grading.


162. Advanced Private Instruction in Music. (2) Studio, one hour; outside practice, five hours. Prerequisite: two years of courses 91A through 91Z or 92. Limited to Ethnomusicology majors. Advanced private or semiprivate music instruction with distinguished musicians, that must be assigned by students and approved by course instructors. May be repeated for credit without limitation. Letter grading.

163. Pathways to Composition, (4) Lecture, four hours. Emphasized requisite: course 11C. Fresh new approaches to composing music for both beginning and experienced composers, while looking at pieces from jazz, classical, and film music repertoire for inspiration and study. 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 rhythmic phrases and call and response, and desire for new compositional materials that must be adapted to their use. Letter grading.

164. World Music Composition. (4) Lecture, three hours; laboratory, three hours; outside study, six hours. Requisites: courses 11A, 11B, 11C. Limited to Ethnomusicology majors. Introduction to composition using variety of Western and non-Western musical systems. Final project required. Letter grading.

C165. Selected Topics in Composition. (4) Lecture, four hours; outside study, eight hours. Evaluation of important ideas 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 and jazz music has interacted with and used other types of music to create new musical languages. Use of concepts, structural paradigms, and inspiration from literature, visual arts, and other sources to develop student compositions. May be repeated once for credit. Concurrently scheduled with course C270. Letter grading.

C169. Music, Science, and Technology. (4) Lecture, four hours; laboratory, four hours; outside study, four hours. Designed for Ethnomusicology, Music, and Music History majors. Application of science and technology for both creation and dissemination of music. Introduction to tools and techniques such as CD mastering, digital sampling, recording, and music synthesis, as well as scientific principles underlying such technologies. Concurrently scheduled with course C269. Letter grading.

170. Acoustics. (4) Lecture, four hours; discussion, one hour. Interrelationship of acoustical and musical phenomena. Tuning systems, consonance and dissonance, tone quality. Lecture, demonstration, and discussion; tours of instrumental collections and acoustic research laboratory. May be repeated for a maximum of 12 units. Letter grading.

171A. Cognitive Psychology of Music. (4) Lecture, four hours; discussion, one hour. Designed for nonmajors. Introduction to psychology of music; historical background and broad field of study, including use of music as stimulus, tests and measurements, and related modes of musical behavior. P/NP or letter grading.

171B. Aesthetics of Music. (5) Lecture, four hours; discussion, one hour. Designed for nonmajors. Historical survey of musical aesthetic thought and practice. Selected readings and musical examples. P/NP or letter grading.


176. Psychology of Film Music. (4) Lecture, four hours; outside study, two hours. Study of psychological and sociological aspects of film 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 music in context of social behavior and how musical patterns reflect patterns exhibited in other cultural systems, including economic, political, religious, and social structure. P/NP or letter grading.

C182. Music Industry. (4) (Same as Music CM182. Music History CM186, and Music Industry M182.) Lecture, four hours; discussion, one hour; outside study, seven hours. Limited to Ethnomusicology, Music, and Music History majors. Overview 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 Ethnomusicology majors. Introduction to history of field, basic fieldwork and analysis methods, and current issues in research. Letter grading.

C184. Public Ethnomusicology. (4) Lecture, four hours; outside study, eight hours. Designed for Ethnomusicology majors. How music industry functions and how products are created, marketed, and consumed. Techniques of pure research, basic and theoretical in nature, contrasted with those of applied research, practical and policy-oriented in approach. Concurrently scheduled with course C286. Letter grading.

185. Information Literacy and Research Skills. (1) Tutorial, one hour. Limited to Ethnomusicology majors. Designed to assist students with becoming informed literate. How to locate, identify, and critically evaluate and use print and electronic information effectively and ethically. P/NP grading.

186. Senior Recital or Project. (2) Tutorial, one hour. Limited to seniors. Final project for students who, with approval from their faculty advisers, perform one-hour recital or have their compositions performed in one-hour recital. Organization and arrangement of recital or project is under the supervision and preparation of program for performance. Grades are assigned in term recital is performed or composition is completed and performed. P/NP grading.

188. Special Courses in Ethnomusicology. (4) Lecture, four hours; outside study, four hours. 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. (2-4) (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. (2-4) Tutorial, six to 12 hours. Limited to seniors in public ethnomusicology emphasis in Ethnomusicology. 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 or letter grading.
196. World Music Teaching Practicum. (4) Seminar, two hours; fieldwork, three hours; outside study, seven hours. Preparation: junior or senior Ethnomusicology majors. Integration of academic work and hands-on training. Participation in theoretical discussions of world music education and application of these theories in elementary and secondary music and social studies classrooms. P/NP or letter grading.

197E. Individual Studies in Ethnomusicology. (2 to 4) Tutorial, one hour; outside study, five to 11 hours. Preparation: 3.0 grade-point average. Limited to seniors. Individual intensive study in ethnomusicology, with scheduled meetings to be arranged between faculty member and student. Tangible evidence of mastery of subject matter resulting in final research project must be reported for maximum of 8 units. Individual contract required. P/NP or letter grading.

197V. Individual Studies in Systematic Musicology. (2 to 4) Tutorial, one hour; outside study, five to 11 hours. Preparation: 3.0 grade-point average. Limited to seniors. Individual intensive study in systematic musicology, with scheduled meetings to be arranged between faculty member and student. Tangible evidence of mastery of subject matter resulting in final research project may be reported for maximum of 8 units. Individual contract required. P/NP or letter grading.

199. Directed Research or Senior Project in Ethnomusicology. (2 to 4) Tutorial, to be arranged. Limited to junior/senior Ethnomusicology majors. Supervised individual research or investigation under guidance of faculty mentor. Culminating paper or project required. May be repeated for maximum of 8 units. Individual contract required. Letter grading.

Graduate Courses

C200. Audiovisual Archiving in 21st Century. (4) Seminar, three hours. Designed for Ethnomusicology major graduate students. Present state, 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.


C205. Seminar: Information Technology and Research Skills. (4) Seminar; three hours. Limited to graduate ethnomusicology students. Lecture, demonstration, and practice of technical skills for research on and about music that is essential to student careers as ethnomusicologists, specifically information technology skills, acoustics, and representative tools for nonlinguistic acoustic phenomena. Basic understanding of acoustics, ability to represent sounds in various graphic formats, and ability to locate and organize information sources related to field of ethnomusicology. Letter grading.

C206. Integrating Theory with Ethnography. (4) Seminar, three hours. Designed to show how theory and practice of ethnomusicology are not separate, but intertwined in the manner in which various authors have integrated theoretical writings and ideas with their ethnoraphical or historical data. Reading of several recent ethnographies, mostly about musical forms and their history, with attention to theoretical writings that inform arguments of these books. Letter grading.


C208. Seminar: Latin American Music. (4) Seminar, three hours. Review of bibliographic, methodological, and philosophical literature on Latin America, working from both general and specific perspectives. Exploration of research problems and investigations on specific musical cultures and distinct genres of music. Letter or P/NP grading.


C212. African American Music in California. (4) (Same as Afro-American 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 development of African American music in California. Concurrently scheduled with course CM112, S/U or letter grading.

C222A-C222B-C222C. Jazz Styles and Analysis. (4-4-4) Lecture, four hours; outside study, eight hours. Designed for Ethnomusicology, Music, and Musical Theater majors and others interested in jazz styles and repertoire intended for students with music backgrounds. Concurrently scheduled with courses C122A-C122B-C122C. Letter grading. C222A. Early Jazz to Swing Era. C222B. Bebop to Avant-garde; C222C. Post-bop: Bop and beyond. Letter grading.

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 impetus that fueled his daring move from acoustic 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, and other influences. Emphasis on jazz forms and repertoire intended for students with music backgrounds. Concurrently scheduled with course C212A-C212B-C212C. Letter grading. C222A. Early Jazz to Swing Era. C222B. Bebop to Avant-garde; C222C. Post-bop: Bop and beyond. Letter grading.


C229. Seminar: Music of Mainland Southeast Asia. (4) Seminar, three hours. Major issues in study of Mainland Southeast Asia music, including music of Laos, Cambodia, Vietnam, Thailand, and Burma. Concurrently scheduled with course C100. Letter or P/NP grading.

C230. European Musics: Politics, Identities, Nationalisms. (4) Seminar, three hours; outside study, nine hours. Designed for graduate students in Ethnomusicology. Analysis of major issues in the study of traditional and popular musics, with particular attention to the 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 the uses of music in everyday life, and in political processes. Exploration of the role of music in society, with perspectives from anthropology, history, performance theory, and cultural studies. Concurrently scheduled with course C230A. Letter or P/NP grading.

C233A-233B. European Traditional and Popular Music. (0-0-4) Discussion, one hour. Review of literature on European traditional and popular music, with special attention to modern issues and 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 Europe contemporary and modern. Letter 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.

C237. Seminar: African Music. (4) Seminar, three hours. Requisites: course 136A or C136B. Analysis of literature on African music scholarship from late 19th to present, including some analysis of musical, historical, social, and cultural aspects of indigenous and contemporary art forms. Letter grading.


C241. Music of Turkey and Iran. (4) (Formerly numbered 241.) Seminar, three hours. Limited to graduate ethnomusicology students. 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 of improvisation, and contemporary practice. Concurrent participation in Near East performance ensemble (course 91N or 161N) required. Concurrently scheduled with course C141. S/U or letter grading.

C248. Classical Music of India. (4) Lecture, three hours; outside study, nine hours. Requisite: course 146 or 147. Study of history, theory, and practice of north and south Indian classical music. Emphasis on music history and translation of present-day forms, styles, techniques, and musical instruments. Concurrent participation in Indian performance group (course 91F) required. S/U or letter grading.

C250. Music and Politics in East Asia. (4) Lecture, four hours. Designed for graduate students. Political imperatives have long had direct and often explicit impact on music sound and context in East Asia. Examination of interaction of ideology and musical practice in medieval Korea and in contemporary Korea, Japan, Taiwan, and China. Concurrently scheduled with course C141. S/U or letter grading.

C251. 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 the Indonesian performance group (course 91B or 91H) required. S/U or letter grading.

C255. Intangible Cultural Heritage Worldwide. (4) Lecture, three hours. Designed for ethnomusicology, music history, and culture and gender graduate students. Through critical reading of publications by scholars, officials, and culture-bearers involved in intangible cultural heritage policy and practice, examination of history of heritage conservation; concepts of tangible and intangible; pioneering roles of Japan, South Korea, and UNESCO in making intangible cultural heritage focal point of much cultural policy worldwide; tensions among international ideals, nation-state nationalisms, regionalism, ethnicity, and iden- tity in creating intangible cultural heritage policies in different settings; U.S. equivalents to intangible cultural heritage policies and practices in other countries, regions, ethnic communities, and professional organizations in cultural preservation schemes; and related concept of sustainabil- ity. Concurrently scheduled with course C156A. Letter grading.


C259. Music on China’s Periphery. (4) Lecture, four hours; outside study, eight hours. Designed for gradu- ate Ethnomusicology, Music, Musicology, and World Arts and Cultures majors. Survey of musics from Chi- na’s border regions and neighboring countries: tech- nical musical characteristics and important contextual issues related to traditional and modern styles from Mongolia, Uighurs of Xinjiang, Tibet, Tibet-Burman peoples, Himal, and indigenous peoples of Taiwan. Concurrently scheduled with course C159. S/U or letter grading.

M261. Gender and Music in Cross-Cultural Per- spective. (4) (Same as Gender Studies M261.) Semi- nar, three hours. Designed to foster in-depth under- standing of gender in study of music as culture. Top- ics range from ethnomusicology of gender and sexuality; (de)codification of messages of resistance, and gen- der representation to gendered politics via musical production. S/U or letter grading.

262. Musical Ethnography. (4) Seminar, three hours; outside study, nine hours. Examination of selected book-length ethnographies, most published in last 10 years, as both literary genre and research procedure. S/U or letter grading.

263. Perspectives in Popular Music Research. (4) Seminar, three hours. Examination of theoretical and methodological issues in study of city, cultural entity that affects and is affected by music making. S/U or letter grading.

264. Urbanism and Music. (4) Seminar, three hours; outside study, nine hours. Theoretical and methodo- logical issues in study of city as cultural entity that interacts with, 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’s religions. S/U or letter grading.

266. Charles Seeger’s Life and Thought. (4) Semi- nar, three hours; outside study, nine hours. Charles Seeger’s (1886 to 1979) major writings and influences on three fields he helped to found (ethnomusicology, systematic musicology, historical musicology), as well as his introduction of ethnomusicology and American composition in 20th century. S/U or letter grading.

267. Music and Ecstasy. (4) Seminar, three hours; outside study, nine hours. Relationship between musi- and consciousness in different world cultures and role music plays in ecstatic experiences. Phenomena include trance, spirit possession, shamanism, reli- gious ecstasy, mysticism, and artistic inspiration. S/U or letter grading.

268. Modernity and Musical Experience. (4) Semi- nar, three hours; outside study, 10 hours. Limited to graduate students. Examination of possibilities for subject-centered musical ethnoarchaeology to account for fragmentary musical data. Consideration of local and world musics in relation to modernity, postmodernity, globalization, notions of self and subject, power, and media images. Letter grading.

269. Music, Science, and Technology. (4) Lecture, four hours; laboratory, four hours; outside study, four hours. Designed for Ethnomusicology, Music, and Musicology majors. Application of science and technology for both creation and dissemination of music. Introduction to tools and techniques such as CD mastering, digital sampling, recording, and music synthesis, 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 graduate students. Evaluation of important musical concepts and approaches to develop general compositional techniques and under- standing. Composers of jazz, European classi- cal, and other musical genres; successful approaches use of extended compositional forms. Examination of way in which world music traditions have interfaced with jazz and other types of music to create new musical languages. Use of concepts, structural paradigms, and inspiration from literature, visual arts, and other sources to develop student compositions. May be repeated once for credit. Concur- rently scheduled with course C165. Letter grading.

271. Seminar: Acoustics of Music. (6) Seminar, three hours. Requisite: course 170. Selected topics in acoustics, including laboratory methodologies and practical applications. Topics include Western and non-Western instruments, psycho-acoustics, and methods of spectral analysis. May be repeated once for credit. S/U or letter grading.

272. Seminar: Psychology of Music. (6) Seminar, three hours. Selected topics in psychology of music, including recent findings in brain research, musical perception, learning, cognition, memory, therapy, af- fect, meaning, and measurement. May be repeated once for credit. S/U or letter grading.

273. Seminar: Acoustics of Music. (6) Seminar, three hours. Specific topics in Western and non-Western aesthetic thought, including value, meaning (se- mitics), historical development of theoretical per- spectives and approaches to music, and music 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 mu- sic in film, animation, and dance through lens of cog- nitive psychology, with focus on interpretation of film music relative to model of musical meaning. Concur- rently 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 musicol- ogy covering disciplines such as anthropology, acoustics, aesthetics, music perception, philosophy, organology, sociology, and experimental approaches. May be repeated once for credit. S/U or letter grading.


281A-281B. Seminars: Field and Laboratory Meth- ods in Ethnomusicology. (6-6) Seminar, three hours; laboratory, two hours. Requisites: courses 201, 202. Fieldwork concepts and methods using technical equipment, conducting interviews, dealing with ethi- cal issues, and designing research projects. S/U or letter grading.


285. Seminar: Comparative Music Theory. (6) Semi- nar, three hours. Comparative study of codified music theories of select cultures — Western and non-West- ern — considered in themselves and as expressions of their societies. Theory and practice of Western music; its place between cultural values and artistic practice in different civilizations. S/U or letter grading.


CM288. Music Industry. (4) (Same as Music CM282 and Musicology CM288.) Lecture, four hours; discus- sion, one hour; outside study, eight hours. Limited to Ethnomusicology, Music, and Musicology majors. Ex- amination of influence of music industry on way mu- sic 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 recoding, MTV, and popular music today. Concurrently scheduled with course CM182. Letter grading.


291. Ethnomusicology Colloquium Series. (1) Re- search group meeting, one hour. Limited to graduate ethnomusicology students. Introduction to new trends and issues in discipline of ethnomusicology in effort to strengthen and stimulate intellectual commu- nity within department. Topics vary from term to term and consist of presentations by guest lecturers, facult- y members, and students. May be repeated for cred- it. 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 cur- rent interest presently offered in ethnomusicology program. S/U or letter grading.

375. Teaching Apprentice Practicum. (1 to 4) Semi- nar, to be arranged. Preparation: apprentice person- nel employment as teaching assistant, associate, or fellow. Teaching apprenticeship under active guid- ance, and participation in preparation of lesson plans, responsibility for curriculum and instruction at UCLA. May be repeated for credit. S/U grading.
European Studies

See International and Area Studies

Family Medicine

David Geffen School of Medicine

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Patrick T. Dowling, M.D., M.P.H. (Kaiser Permanente Endowed Professor of Community Medicine), Chair
Michelle Anne Bholat, M.D., M.P.H., Vice Chair, Clinical Affairs
Denise K.C. Sur, M.D., Vice Chair, Education

Directors
Daniel Castro, M.D., Harbor-UCLA
Gregory Dalguist, M.D., Pomona Valley
Pamela Davis, M.D., Northridge Hospital
David Araujo, M.D., Ventura County
Monica Quezada, M.D., Kaiser-Sunset
Adolfo Aguilera, M.D., Riverside County
Kathleen Dor, M.D., Kaiser-Woodland Hills
Denise K.C. Sur, M.D., UCLA

Scope and Objectives

The Department of Family Medicine provides all students with a basic introduction to family-centered care in both the inpatient and ambulatory settings. During the basic clerkship, students develop (1) an appreciation of the breadth and scope of family medicine, (2) a basic knowledge in the broad content areas of family medicine, and (3) fundamental clinical skills appropriate to family medicine, including the coordination and management of patients with multiple chronic diseases. The overall goal is to provide students with the opportunity to gain an understanding and appreciation of the central role of the primary care physician in the healthcare system, and to offer advanced clinical training for those students interested in pursuing careers in family medicine. Further, the basic curriculum includes an overview of healthcare issues facing underserved and immigrant populations in urban America, as well as an introduction to health services research in family medicine.

Family Medicine

Upper Division Course

190. Directed Research in Family Medicine. (2 to 8) Tutorial, two hours. Limited to juniors/seniors. Supervised individual research or investigation under guidance of faculty mentor. Culminating paper required. May be repeated for credit. Individual contract required. P/NP or letter grading.

Film, Television, and Digital Media

School of Theater, Film, and Television

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William McDonald, M.F.A., Chair

Professors

Janet L. Bergstrom, Ph.D.
Barbara Boyle, J.D.
John T. Caldwell, Ph.D.
Thomas F. Denove, B.A.
Gyula Gazdag, M.F.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.
Choon A. Noh, Ph.D.
Nancy Richardson, M.F.A.
Tami E. Schwartz, Ph.D., Dean
Charles E. Scheetz, B.A.
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.
Nicholas K. Browne, Ed.D.
William Froog, B.J.
Richard C. Hawkins, M.A.
Marina Goldovsky, Ph.D.
A.P. González, 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.
Robert Rosen, M.A.
Darrell E. Ross, M.F.A.
Delia N. Salvi, Ph.D.
Ruth E. Schwartz, Ph.D.
Vivian Sobochock, Ph.D.
Howard Suber, Ph.D.
Peter Wollen, B.A.
John W. Young, M.A.

Associate Professors

Denise R. Mann, Ph.D.
C. Fabian Wagemister, M.F.A.

Assistant Professor

Allyson N. Field, Ph.D.

Lecturer S.O.E.

Harold L. Ackerman, M.A.

Lecturers

Tim T. Albauha
Beth Babayak
Bill J. Barninski
Vincent M. Brook
Jeffrey A. Burke
Greg D. Cohen
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. Kuntz, Ph.D.
Neil Landau
Valerie M. Lettera
Eric Marin, J.M.
Tom Nunan
Deland Nuse
Fred A. Rubin
Belinda S. Starkie, M.F.A.
Linda Voorhees
Douglas A. Ward
Kris T. Young, M.F.A.

Adjunct Professor

Myrl A. Schreibman, M.F.A.

Adjunct Assistant Professor

John Simmons, M.F.A.

Visiting Professor

Cecelia Hall

Visiting Assistant Professors

Tim T. Albauha
Paul A. Almond
Neema Barnette
Eric Baum
Jeffrey Bell
Dustin Lance Black
Reginald Brown
Norman L. Buckley
Patricia Cardoso
Robert Cooper
Russell H. Edmunds
Antwone Q. Fisher
Alex Franklin
Alan Fried
Tim Good
David Hoberman
Roderick W. Holcomb
The Department of Film, Television, and Digital Media is dedicated to the study and production of film, video, and television as forms of art and expression with social, political, cultural, and economic significance. The minor consists of a selection of upper division courses that introduce students to the practice and critical study of film, television, and digital media.

To enter the minor students must have declared a major in a department other than the Film, Television, and Digital Media Department, be in good academic standing (minimum 3.0 grade-point average), have completed at least three film and television courses with grades of C or better, and file an application and essay 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 Upper Division Courses (28 to 32 units):**


A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor. All units applied toward the minor must be taken in residence at UCLA. Film and television courses taken at other institutions cannot be applied toward the minor.

Each minor course must be taken for a letter grade, 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://grad.ucla.edu/gasa/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 contemporary 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

100A. Junior Symposium. (1 to 2) (Formerly numbered 100C.) Laboratory, three hours. Limited to Film and Television majors. Structured forum in which undergraduate juniors meet on regular basis to discuss curricular issues, meet with faculty members, and have opportunity to give feedback to guest speakers from within film industry. May be repeated for maximum of 4 units. Letter grading.

100B. Senior Symposium. (1 to 2) Laboratory, three hours. Lecture; course 100A. Limited to Film and Television majors. Structured forum in which undergraduate seniors meet on regular basis to discuss curricular issues, meet with faculty members, and have opportunity to array of guest speakers from within film and television industry. May be repeated for maximum of 4 units. Letter grading.

101. Story and Style: Theory and Practices of Film-making. (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.

105A. History of American Motion Picture. (6) Lecture; screenings; eight hours; discussion, one hour. Historical and critical survey, with examples, of American 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. P/NP or 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.


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. (5) Lecture; screenings, eight hours; discussion, one hour. Development of critical standards and examination of techniques of teaching and persuasion used in select documentary, educational, and propaganda films. Letter grading.

110A. American Television History. (5) Lecture; screenings, five hours; discussion, one hour. Critical survey of American television, 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 analysis of early shows, as well as Hollywood films that comment on radio and television. Consideration of television programs and series to see how society’s cultural issues (consumerism, lifestyle, gender, race, national identity) and industry practice (programming, policy, regulation, business). Letter grading.

110C. World Media Systems. (4) Lecture; viewing; four hours; discussion, one hour. Prerequisite: course 110A. Designed for seniors. 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.

111. Women and Film. (6) (Same as Gender Studies M111.) Lecture; eight hours; discussion, one hour. Historical critical approach to women’s participation in women’s art and cinema that may include authorship, stardom, female genres, and images of women in Hollywood cinema, alternative cinema, and independent cinema from silent era to present. Letter grading.

112. Film and Social Change. (6) Lecture; screenings, eight hours; discussion, one hour. Development of documentary and dramatic films in relation to and as force in social development. Letter grading.

113. Film Authors. (5) Lecture; screenings; five hours; discussion, one hour. In-depth study of specific film author (director or writer). 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 films of Alfred Hitchcock and influence he has had on other filmmakers. Lecture 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 contribution world cinema made by women directors, with focus on women directors working in various eras and modes of production (e.g., silent cinema, documentary). 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 and analysis of major film genres (e.g., Western, gangster cycle, musical, silent epic, comedy, social drama). May be repeated once for credit with consent of department and topic change. P/NP or letter grading.


116. Film and Fiction. (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 Chicana and Chicano Studies M114.) Lecture; screenings; five hours; discussion, one hour. Goal is to gain nuanced understanding of Chicano cinema as political, socioeconomic, cultural, and aesthetic practice. Examination of representation of Mexican Americans and Chicanos in four Hollywood genres — silent “greaser” films, social problem films, Westerns, and gang films — that are major genres that account for films about or with Mexican Americans produced between 1908 and 1980. Examination of recent Chicano-produced films that subvert or signify on these Hollywood genres, including Zoot Suit, Ballad of Gregorio Cortez, and Born in East L.A. Consideration of shortcuts and other more experimental critiques Holly-wood image of Chicanaos. Guest speakers include both pioneer and up-and-coming filmmakers, P/NP or letter grading.


C120. Digital Cinematography. (4) Lecture, three hours. Requisites: courses 100A, 185. Advanced study of principles of digital cinematography, with emphasis on electronic exposure control, lighting, for- matics, fixing weather or production problems. Discus- sion of evolution of visual effects, as well as problems
and blessings inherent in constantly evolving technology. Top visual effects consultants to be guest lecturers. P/NP or letter grading.

122M. Film and Television Directing. (4) (Formerly numbered 188M.) Lecture, three hours. Through discussions, screenings, demonstrations, and guest lectures, emphasis on the practical craft, and theoretical issues of directing. Concurrently scheduled with course C242. Letter grading.

124. Moving Digital Image. (4) Lecture, three hours; laboratory, three hours. Investigation of different ways of creating and manipulating linear moving images (digital video) on desktop computers, exploring both creative and theoretical aspects of this production environment. Students conceive and produce number of short projects. Concurrently scheduled with course C243. Letter grading.

144. Interactive Multimedia Authoring. (4) Lecture, three hours; laboratory, three hours. Introduction to expressive and aesthetic potential of interactive digital media and its theoretical issues. Exploration of methodologies and tools for media integration, interface design, and interactive audiovisual construction. Students conceive, produce, and master individual interactive multimedia projects. May be repeated once for credit. Concurrently scheduled with course C245. Letter grading.

154. Creative Authoring for World Wide Web. (4) Lecture, three hours; laboratory, three hours. Exploration of creative aspects of the Web as medium for personal/collective expression. Students produce Web works and serve them online. Contextualization of medium by looking at its history, embedded ideology, and sociopolitical consequences. May be repeated twice 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 assembly of creative team and analysis of industrial context, both independent and studio. Screenings viewed outside of class and on reserve at Powell Library. Letter grading.


148. Advanced Film Editing. (4) Lecture, laboratory, four hours; workshop, four hours. Laboratory, two hours. Designed for students with previous laboratory course experience, course provides opportunity to create larger-scale digital media works with advanced software tools and techniques. May be repeated twice for credit. Concurrently scheduled with course C248. Letter grading.

149A-C149B. Music in Film: Another Way to Tell Stories. (4-4) Lecture, three hours. Course C149A is requisite to C149B. Exploration of concepts and issues that drive creation and use of music in film. Through lecture/discussion and practical assignments, examination of deep collaboration between filmmaker and composer. Viewing of noteworthy examples and following of collaboration of filmmakers with composers, with weekly sessions dedicated to scoring, creation and development of new scores, studio visits, and creative/conceptual dialogue between musician and filmmaker. Preparation of film ready for scoring 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 100A, 185. Limited to Film and Television majors. Introduction to image control in motion picture photography through exposure, lighting, and selection of film, camera, and lenses. Supervised practical experience in the application of photographic knowledge to complete process of camera work 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 interactive imaging, design, and art direction. Production and completion of exercise (no longer than three minutes), using 16mm nonsync sound film. May be repeated twice for credit. Letter grading.

152C. Digital Audio Postproduction. (4) Lecture, three hours; laboratory, three hours. Limited to departmental majors. Through discussion, demonstrations, and practical 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 100A, 150, 185. Limited to Film and Television majors. Introduction to principles and practices of film and television sound recording, production, and engineering. May be repeated twice for credit. Letter grading.

154B. Advanced Film Editing. (4) Lecture, three hours. Laboratory, one hour. Requisites: courses 100A, 185. Limited to Film and Television majors. Instruction and exercise in the concepts and software of virtual production environments and digital postproduction tools. Letter grading.

163. Directing Cameras. (4) Laboratory, eight hours. Requisites: courses 100A, 185. Limited to Film and Television majors. Investigation of operational aspects of camera choice and interactive role of visual 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. Experiences in analysis of script and character for purpose of directing actors. Emphasis on eliciting best possible performance from actors. May be repeated twice for credit. P/NP or letter grading.

165. Advanced Narrative Television Directing. (4) Laboratory, six hours; Requisites: courses 134, 185. Limited to Film and Television majors. Supervised experience in television multicamera direction, with emphasis on creative use of camera angles, sound, composition, and communication with those in front of and behind camera. May be repeated twice for credit. Letter grading.

168. Creative Location Film Production. (4) Lecture, four hours; discussion, four hours; laboratory, to be arranged. Limited to directing or producing program majors. Practicum training in location scouting, directing, and cinematography in various real-life practical situations. 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, with specific focus on motion graphics, compositing, effects processing, and title sequences. Concurrently scheduled with course C470A. Letter grading.

175A-175B. Undergraduate Film Production. (8-4 to 6) Lecture, two hours; laboratory, eight hours. Completion of postproduction (editing, creative design of sound tracks) for short film begun in course 175A.

176A-176B. Advanced Undergraduate Video Production. (6-6 to 8) Discussion, three hours; laboratory, to be arranged. Completion of postproduction (no more than 20 minutes), including its writing, production, and editing. Letter grading.

M177. Film and Television Acting Workshop. (2) (Same as Theater M178) 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.

178. Film and Television Production Laboratory. (2 or 4) Laboratory, to be arranged. Supervised laboratory experience in various aspects of film and television production. May be repeated for maximum of 12 units, but only 8 units may be applied toward Film and Television major. Letter grading.


181B. Writing for Animation. (4 to 8) Lecture, six hours; studio, to be arranged. Requisite: course 181A. Research and practice in creative writing and planning for animated film. May be repeated for maximum of 16 units. P/NP or letter grading.

181C. Animation Workshop. (4 or 8) Lecture, six hours; studio, to be arranged. Preparation: storyboard at first class meeting. Requisite: course 181A. Organization and integration of various creative arts used in animation to form complete study of selected topic. May be repeated for maximum of 16 units. P/NP or letter grading.

183A. Producing I: Film and Television Development. (4) Lecture, three hours. Open to nonmajors. Critical analysis of contemporary entertainment industries and practical approach to understanding and implementing producer’s role in development of feature film and television scripts. Through scholarly and trade journal readings, in-class discussions, script analysis, and select guest speakers, exposure to various entities that comprise feature film and television development process. Basic introduction to story and exploration of proper technique for evaluating screenplays and teleplays through writing of coverage. May be taken independently for credit.

183B. Producing II: Entertainment Economics. (4) Lecture, three hours. Open to nonmajors. Critical understanding of strategies and operating principles that drive decision-making in entertainment industry. Exploration of theoretical frameworks and development of critical perspective, while studying industrial processes through which movie and television properties are financed and exploited throughout all revenue streams. May be taken independently for credit. Letter grading.

183C. Producing III: Marketing, Distribution, and Exhibition. (4) Lecture, three hours. Open to nonmajors. Marketing, distribution, and exhibition of feature films across multiple exhibition platforms and subsequent reception and consumption by audiences. Focus on engagement between distributor, exhibitor, and audience and analysis of various conceptual frameworks and industrial strategies within which these relationships are conceived and operate. May be taken independently for credit.

184A. Overview of Contemporary Film Industry. (4) (Formerly numbered 184.) Lecture, three hours. Examination of evolving economic structures and business practices in contemporary Hollywood film industry, with emphasis on operations of exhibition, and independent distribution companies, their development, marketing, and distribution systems, and their relationships to independent producers, talent, and agencies. Letter grading.

184B. Overview of Contemporary Television Industry. (4) Lecture, three hours. Examination of evolving economic structures and business practices in contemporary Hollywood television industry, with emphasis on operations of networks and cable company series development, marketing, and network branding from 1947 to present. Letter grading.

185. Undergraduate Television and Video Production. (6) Laboratory, six hours. Limited to Film and Television majors. Instruction and exercises in basic techniques of television and video production. Letter grading.

186A. Introduction to Documentary Production. (4) Lecture, three hours; laboratory, three hours; fieldwork, four to six hours. Requisite: course 186B. 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.

186B. Intermediate Documentary Production Workshop. (6) 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. Requisite: course 186B. Limited to Film and Television majors. Advanced viewing and discussion of selected documentaries and instruction in production skills necessary to create video documentaries. Completion of series of exercises from conceptualization through postproduction, culminating in production of short documentary. Letter grading.

187A-187B. Producing and Directing Remote Multicamera Production. (4-6) Laboratory, three hours (additional hours to be arranged). Letter grading. 187A. Professionally oriented lecture/laboratory/final workshop course designed to provide disciplined planning, responsible leadership, and organizational and problem-solving skills required in deadline remote production. Emphasis on clarity of vision, storytelling, effective execution of pitch, preproduction, shoot, and editorial. 187B-187C. Instruction and supervised productions of remote experience, with focus on development and execution of concept. Experience in planning and supervising professional experiences in working with talent, production venues, and production logistics of remote 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.

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. Letter grading.

193B. Television Curatorship. (4) Lecture, two hours; discussion, two hours; laboratory, four hours. Study of principles and techniques of television curatorship and research, including but not limited to cataloging, and independent distribution 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.

195. Corporate Internships in Film, Television, and Digital Media. (2 to 6) Tutorial, to be arranged; fieldwork, 14 to 20 hours. Enforced corequisite: course 183A or 183B or 183C. Limited to juniors/seniors. Corporate internship in supervised setting in business related to film, television, and digital media industries. 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 Film, Television, and Digital Media. (2 to 8) Tutorial, three hours. Limited to senior Film and Television majors. Supervised directed research or independent research under guidance of faculty mentor. Culminating 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 work as required). Designed for graduate students. Examination and study of research methods, techniques, and resources related to film and television research, including development of computer skills for preparation of bibliographies, online database searching and retrieval and, when appropriate, use of computer/video/educational technology for research. Letter grading.

201A. Seminar: Media Industries and Cultures of Production — Foundations. (8) (Formerly numbered 201.) Seminar, three hours; film screenings, three hours. Critical survey of various scholarly traditions and methods (ethnographic, sociological, political-economic, geographic) that have been used to study film and television production practices as cultural, social, and industrial phenomena, as basis for individual student research projects. Letter grading.

201B. Seminar: Media Industries and Cultures of Production — Transmedia Projects. (6) Three hours; film screenings, three hours. Requisite: course 201A. Examination of contemporary production studies research and transmedia practices, including innovations in marketing, licensing, distribution, industrial organization, creative work, new technologies, and evolving relations between fans and producers in digital economy. Letter grading.

202. Seminar: Media Audiences and Cultures of Consumption. (6) Seminar, three hours; film screenings, three hours. Critical study of reception and use of television and electronic media and examination of theoretical approaches to culture and audience research. Consideration of technical or cultural aspects, and their impact on audience, industry, and mass-marketed images of media in societies.

203. Seminar: Film and Other Arts. (6) Seminar, three hours; film screenings, four to six hours. Designed for graduate students. Studies in interrelationships between film and fine arts, or performing arts, or literature (single genres or cross-genre), 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 text-matter) and access features, as approach to learning what makes film
205. Seminar: Creating Visual Essays for Film History and Analysis. (6) Seminar, three hours; laboratory, three hours. Prior technical knowledge not required; technical assistance is available. Creation of individual research projects in film/television history and analysis destined for audio-visual medium, finalized as high-resolution DVDs. Projects may be extensions of research intended for print publication, dissertation chapters, conference presentations, teaching, etc. Equal emphasis on acquiring basic skills needed to create visual essays and on methods of research for this new form of scholarly research. Comparison of advantages and disadvantages of print versus audio-visual publication. Use of Adobe Production Suite. Letter grading.

206A. Seminar: European Film History. (6) Seminar, three hours; film screenings, four to six hours. Designed for graduate students. Studies in different periods of European cinemas or movements. Topics may include Italian neorealism, French film of 1930s, French New Wave and crime film, Weimar cinema, and Soviet silent cinema. Concurrently scheduled with individual departmental listings for special topics. May be repeated twice for credit with topic change. Letter grading.

206B. Seminar: Selected Topics in American Film History. (6) Seminar, three hours; film screenings, four to six hours. Introduction to industrial, social, and aesthetic history of American film. Letter grading.

206D. Seminar: Silent Film. (6) Seminar, three hours; film screenings, two to four hours. Discussion of silent film from its beginning in 1895 to transition to sound cinema in 1927. 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 of form, style, politics, and history of experimental, innovative, avant-garde, and minority film and video. Letter grading.

208A. Seminar: Film Structure. (6) Seminar, three hours; film screenings, four to six hours. Designed for graduate students. Examination of various film conventions, both fictional and nonfictional, and of role of structure in narrative or nonnarrative film. Letter grading.

208B. Seminar: Classical Film Theory. (6) Seminar, three hours; film screenings, four hours. Study of important critical topics and lines of inquiry that characterize theoretical writings of Arneil, Eisenstein, Bazin, Kraeauer, etc. Letter grading.

208C. Seminar: Contemporary Film Theory. (6) Seminar, three hours; film screenings, four to six hours. Requisite: course 208B. Designed for graduate students. Study of redefinition of aims and methods of film theory through contemporary writings. S/U or letter grading.

209A. Seminar: Documentary Film. (6) Seminar, three hours; film screenings, four to six hours. Designed for graduate students. Nonfiction 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. Designed for graduate students. Animation as an 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. Consideration 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.

211A. Seminar: Historiography. (4) Seminar, three hours. Limited to Film and Television M.A. candidates. Beginning examination of function and methods of writing film and television history as seen in works of key historians in U.S. and Europe. S/U or letter grading.

211B. Seminar: Historiography. (4) Seminar, three hours. Limited to Film and Television Ph.D. candidates. Examination of function and methods of writing film and television history as exemplified in this tradition, with attention to central issues of historical thought on media. S/U or letter grading.

212. Cinema and Media Studies Graduate Colloquium. (2) Lecture, two hours. Exchange with scholars inside and outside department through lectures and academic paper presentation and offers students practice in presenting papers for professional conferences, CV writing seminars, job market/interview preparation seminars, and discussion of current topics and trajectory of area of cinema and media studies. May be repeated for maximum of 14 units. S/U grading.

213. Seminar: Theory and Method. (6) Seminar, three hours. Limited to Film and Television Ph.D. candidates. Examination of major modes of theoretical reflection that bear on film and television through study of central texts of such traditions as phenomenology, auteurism, semiology, psychoanalysis, sociology, etc. 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 other is concerned with theories of difference rather than similarity or identity — with how other cultures enter into politics of representation and re-presentation; an understanding of the politics of difference without opposition, (2) heterogeneity without hierarchy, and/or (3) otherness without ethnocentrism. Examination of how women, national minorities, and Third World peoples have been rendered others; place of cinematic apparatus in this process and how academization of 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 students. Study of ways film affects and is affected by social behavior, belief, and value systems; considered in relation to role of media in society. May be repeated once for credit. S/U or letter grading.

220. Seminar: Television and Society. (6) Seminar, four hours; screenings/discussion, three hours. Designed for graduate students. Study of ways television forms affect and are affected by social behavior, belief, and value systems; study of technological and economic 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. Intensive examination of works of outstanding creators of films. May be repeated twice for credit. S/U or letter grading.

222. Seminar: Film Genres. (6) Seminar, three hours; film screenings, four to six hours. Designed for graduate students. Studies of patterns, styles, and themes of such genres as Western, gangster, war, science fiction, comedy, etc. May be repeated twice for credit. S/U or letter grading.

223. Seminar: Visual Perception. (6) Seminar, three hours; film screenings, three hours. Aesthetic, psychological, physiological, and phenomenological approaches to vision as they relate to ways in which viewers experience and value film, television, and digital media. Letter grading.

244. Computer Applications for Film Study. (6) Lecture, three hours; film screenings, three hours. Survey of computer applications relevant to film study, principally computer-videographic systems and image capture technology. S/U or letter grading.

259. Seminar: Videogame Theory. (6) Seminar, three hours; laboratory; three hours. Videogame theory, with exploration of nature of medium, rather than looking at histories of game. Consideration of the individual impacts and context of various games, looking at history, industrial practice, social effects, or any other of many interesting questions that games also raise. Acknowledgment of roots in film, television, and media studies and investigation of emerging videogame field. S/U or letter grading.

269. Seminar: Contemporary Topics in Television, Film, and Television. (2) Same as Seminar C269. Lecture, two hours; screenings, two hours. Limited to junior/senior graduate and advanced undergraduate students. Examination of critical process in teacher, film, and television, with consideration of writing, direction, production, and performance. Overview of individual components and ongoing analysis 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.

274. Moving Digital Image. (4) Lecture, three hours; laboratory, three hours. Investigation of different ways of creating and manipulating linear moving images (digital video) on desktop computers, exploring both creative and theoretical aspects of this production environment. Students conceive and produce number of short projects. Concurrently scheduled with course C143. Letter grading.

274A. Interactive Multimedia Authoring. (4) Lecture, three hours; laboratory, three hours. Introduction to expressive and aesthetic potential of interactive digital media and its theoretical issues. Exploration of methodologies and tools for media integration, interface design, and interactive audiovisual construction. Students conceive, produce, and master individual interactive multimedia projects. May be repeated once for credit. Concurrently scheduled with course C144. Letter grading.

2245. Creative Authoring for World Wide Web. (4) Lecture, three hours; laboratory, three hours. Exploration of creative aspects of World Wide Web as medium both creative and theoretical aspects of this production environment. Students conceive and produce Web works and serve them online. Contextualization of medium by looking at its history, embedded ideology, and sociopolitical consequences. May be repeated once for credit. Concurrently scheduled with course C145. Letter grading.

246. Seminar: Issues in Electronic Culture. (6) Seminar, three hours; laboratory, three hours. Critical studies seminar with seven hands-on laboratory computer workstations that explores impact of new technologies on contemporary culture and aesthetics. Students do laboratory projects using visualization, image manipulation tools, and Internet authoring tools. Letter grading.

247. Planning Independent Feature Production. (4) Lecture, three hours. Analysis of procedure, problems, and budgets in planning feature-length script for film and television production, with emphasis on
role of producer and creative organizational techniques of producing. Concurrently scheduled with course 273.


287A. Introduction to Art and Business of Producing I. (4) Seminar, three hours. Introduction for first-year producers program students to producer's role in navigating unique dynamic between art and commerce in entertainment industry. Overview of development, production, and distribution of feature films for worldwide theatrical market, including identifying material, attracting elements, and understanding basics of studio and independent financing and distribution. S/U or letter grading.

287B. Introduction to Art and Business of Producing II. (4) Seminar, three hours. Requisites: course 287A. Understanding of basics of drama pilot format, style, and treatment skills needed to successfully function in writers' room, as well as viewing as a basis for screening and pitching. S/U or letter grading.

287C. Introduction to Art and Business of Producing III. (4) Seminar, three hours. Requisites: courses 287A, 287B. Development of original show concept and pitch for review and feedback by class, instructor, and guests. Letter grading.

288A-288B-288C. Film Development I, II, III. (4-4-4) Lecture. Three hours. Course 288A is requisite to 288B, which is requisite to 288C. Practical hands-on approach to understanding and implementing producer's role in development of feature film screenplay and negotiating particulars of production process. Through in-class discussions, script analysis, story notes, and guest speakers, exposure to various elements that comprise feature film development process. S/U or letter grading.

288A. Film Development I. Three hours. Basic tenets and analysis of television comedy shows and contemporary industry production and business practices. Development of original show concepts and pitch for review and feedback by class, instructor, and guests. Letter grading.

288B. Film Development II. Three hours. Basic tenets and analysis of television comedy shows and contemporary industry production and business practices. Development of original show concepts and pitch for review and feedback by class, instructor, and guests. Letter grading.

288C. Film Development III. Three hours. Basic tenets and analysis of television comedy shows and contemporary industry production and business practices. Development of original show concepts and pitch for review and feedback by class, instructor, and guests. Letter grading.

289A-289B-289C. Non-Writing Producer, Network Executive, Studio. (4) Seminar, three hours. Requisites: courses 288A-288B-288C. Key insights into financing and distribution of independent or specialty feature 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. Three hours. Seminar, three hours. Forum for roundtable strategy sessions and mock story meetings with instructor, students, and various industry guests. Development of one story idea for thesis project. S/U or letter grading.

290B. Research and Development II. Three hours. 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. Three hours. Seminar, three hours. Final strategy session for evaluation. Guidance provided by instructor on how to effectively present selected project. Requirements include industry-related book reports, script analysis, and pitching selected concept to agency. Research on to understand marketplace, accumulation and updating of data, and justification for potential buyers comprised of industry professionals. S/U or letter grading.

291A. Studios versus Independents: Navigation Business Process. Four hours. Lecture. Three hours. Tools necessary for producer to navigate Hollywood entertainment industry. Topics discussed through lectures and guest speakers include impact of diversity to navigate relationship between art and commerce in Hollywood, the unique dynamic between art and commerce, the new wave of independent filmmakers, and emphasis on film distribution and exhibition. Through lectures, reading, and guest speakers, exploration of international markets and business affairs, media, and impact of international market on distribution and exhibition of studio releases. S/U or letter grading.


292B. Who Produces Television? Showrunner, Nonwriting Producer, Network Executive, Studio. Who has the role of writers-producers or showrunners in creating television
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<tr>
<th>Course Code</th>
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<tr>
<td>294A</td>
<td>Contracts and Negotiation.</td>
<td>Lecture, three hours. Survey of range of contracts involved in studio productions, including literary and option agreements, artist employment, director employment, writer collaboration agreements, coproduction agreements, music rights license, etc. Actual studio agreements referenced to illuminate potential consequences of each transaction. Negotiation strategy exercises. S/U or letter grading.</td>
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<tr>
<td>294B</td>
<td>Entertainment Law, Business Practices, and Negotiation Strategies.</td>
<td>Lecture, three hours. Course 294A is not requisite to 294B. In-depth analysis of structures and legal aspects of the entertainment industry, with emphasis on television and film. Topics include intellectual property and proprietary rights, project development and production, talent, guild issues, labor/management, ancillary rights, and music rights. Advanced negotiation strategy exercises. S/U or letter grading.</td>
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<tr>
<td>295A</td>
<td>Art of Presentation.</td>
<td>Lecture, three hours. Cultivation of skills needed for students to present themselves and their project goals with clarity and precision to industry professionals. Oral presentations designed to enhance student ability to deliver convincing arguments on range of topics. S/U or letter grading.</td>
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<tr>
<td>295B</td>
<td>Advanced Film and Television Producing Workshop for Producers, Writers, and Directors.</td>
<td>Lecture, three hours. Course 295A is not requisite to 295B. Introduction to the craft of producing for television and film. Emphasis on development, production, and postproduction of projects. Students conceptualize, research, write, shoot, edit, and use of microphones and mixing consoles, and in-depth understanding of optics, photochemistry, elements of electronic processes, and display of time and motion. May be repeated once for credit. S/U or letter grading.</td>
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<tr>
<td>295C</td>
<td>International Financing and Distribution.</td>
<td>Lecture, three hours. Legal and business principles of financing and distribution of feature films. Topics include fundamentals of financial concepts, distribution, international distribution, European coproduction roles, foreign sales agents, and of bankers and completion bond companies. S/U or letter grading.</td>
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<tr>
<td>402A</td>
<td>Directing Actors for Camera Workshop.</td>
<td>Lecture, four hours. Students prepare and direct six-minute films and serve in various capacities on crews. Production workshop designed to give hands-on experience in all aspects of film production (tools and practicum of medium) as each student writes/directs/edits six-minute film. May be repeated for credit. Letter grading.</td>
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<td>403A</td>
<td>Advanced Abstract/Experimental Media Workshops.</td>
<td>Lecture/discussion/laboratory, 12 hours; workshop, to be arranged. Requisites: courses 405, 409, 410A, 410B, 410C, 433. Limited to second term students. Production of advanced individual documentary film or video project. Students conceptualize, research, write, shoot (on location), and edit projects to completion. May be repeated once for credit. S/U or letter grading.</td>
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<tr>
<td>404A</td>
<td>Advanced Abstract/Experimental Media Workshops.</td>
<td>Lecture/discussion/laboratory, 12 hours; workshop, to be arranged. Requisites: courses 405, 409, 410A, 410B, 410C, 433. Limited to second term students. Production of advanced individual documentary film or video project. Students conceptualize, research, write, shoot (on location), and edit projects to completion. May be repeated once for credit. S/U or letter grading.</td>
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<tr>
<td>405B</td>
<td>Video Editing.</td>
<td>Lecture, six hours; workshop, to be arranged. Students prepare and direct six-minute films and serve in various capacities on crews. Exploration of strategies for learning production within academic environment. May be repeated for credit. Letter grading.</td>
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<tr>
<td>408B</td>
<td>Online Editing.</td>
<td>Seminar, three hours. Students prepare and direct six-minute films and serve in various capacities on crews. Exploration of strategies for learning production within academic environment. May be repeated for credit. Letter grading.</td>
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<td>410A</td>
<td>Symposium.</td>
<td>Workshop, six hours; laboratory, to be arranged. Designed to help producers, as well as students interested in the business of producing, to develop their own personal style for telling stories on screen. Letter grading.</td>
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<tr>
<td>410B</td>
<td>Cinematography.</td>
<td>Seminar, three hours. Students prepare and direct six-minute films and serve in various capacities on crews. Exploration of strategies for learning production within academic environment. May be repeated for credit. Letter grading.</td>
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<tr>
<td>410C</td>
<td>Postproduction.</td>
<td>Seminar, three hours. Limited to and required of first-year M.F.A. production program students. Production workshop designed to give hands-on experience in all aspects of film production (tools and practicum of medium) as each student writes/directs/edits six-minute film. May be repeated for credit. Letter grading.</td>
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<tr>
<td>410D</td>
<td>Postproduction Sound.</td>
<td>Seminar, three hours. Limited to and required of first-year M.F.A. production program students. Exploration of principal concepts of film and television production within context of preproduction, production, and postproduction, providing forum for synthesis of knowledge gained in various first-year technical craft courses. Exploration of strategies for learning production within academic environment. May be repeated for credit. Letter grading.</td>
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**Course Descriptions:**

- **294A:** Seminar: Film and Television Curriculum. (4) Seminar, three hours. Survey of range of contracts involved in studio productions, including literary submittal and option agreements, artist employment, director employment, writer collaboration agreements, coproduction agreements, music rights license, etc. Actual studio agreements referenced to illuminate potential consequences of each transaction. Negotiation strategy exercises. S/U or letter grading.

- **294B:** Entertainment Law, Business Practices, and Negotiation Strategies. (4) Lecture, three hours. Course 294A is not requisite to 294B. In-depth analysis of structures and legal aspects of the entertainment industry, with emphasis on television and film. Topics include intellectual property and proprietary rights, project development and production, talent, guild issues, labor/management, ancillary rights, and music rights. Advanced negotiation strategy exercises. S/U or letter grading.

- **295A:** Art of Presentation. (4) Lecture, three hours. Cultivation of skills needed for students to present themselves and their project goals with clarity and precision to industry professionals. Oral presentations designed to enhance student ability to deliver convincing arguments on range of topics. S/U or letter grading.

- **295B:** Advanced Film and Television Producing Workshop for Producers, Writers, and Directors. (4) Lecture, three hours. Course 295A is not requisite to 295B. Introduction to the craft of producing for television and film. Emphasis on development, production, and postproduction of projects. Students conceptualize, research, write, shoot, edit, and use of microphones and mixing consoles, and in-depth understanding of optics, photochemistry, elements of electronic processes, and display of time and motion. May be repeated once for credit. S/U or letter grading.

- **402A:** Directing Actors for Camera Workshop. (4 or 8-8) Limited to nine graduate film and television students. Basics of television and studio production. Students conceptualize, research, write, shoot, and use sound to tell stories on screen. Letter grading.

- **402B:** Advanced Narrative Directing Workshops. (4 or 8-8) Limited to nine graduate film and television students. Production workshop designed to give hands-on experience in all aspects of film production and scripting. Letter grading.

- **403A:** Advanced Documentary Workshops. (4 or 8-8) Lecture/discussion/laboratory, 12 hours; workshop, to be arranged. Requisites: courses 405, 409, 410A, 410B, 410C, 433. Limited to second term students. Production of advanced individual documentary film or video project. Students conceptualize, research, write, shoot (on location), and edit projects to completion. May be repeated once for credit. S/U or letter grading.

- **405:** Television Production Workshop. (8) Laboratory, eight hours; other, to be arranged. Limited to graduates and graduate students. Production workshop designed to give hands-on experience in all aspects of film production and direction, focusing on student multi-camera set with minimal use of remote camera. Use of various formats of video production, including scripted and non-scripted projects, culminating in narrative through-camera project. S/U or letter grading.

- **408A:** Video Editing. (4-4) Discussion, four hours; laboratory, to be arranged. Limited to graduate film and television students. Investigation of the business of producing, as well as students interested in the business of producing, their own personal style for telling stories on screen. Letter grading.

- **410B:** Cinematography. (3-3) Seminar, three hours. Limited to and required of first-year M.F.A. production program students. Exploration of principal concepts of film and television production within context of preproduction, production, and postproduction, providing forum for synthesis of knowledge gained in various first-year technical craft courses. Exploration of strategies for learning production within academic environment. May be repeated for credit. Letter grading.

- **410C:** Postproduction. (3-3) Seminar, three hours. Limited to and required of first-year M.F.A. production program students. Production workshop designed to give hands-on experience in all aspects of film production and scripting. Letter grading.

- **410D:** Postproduction Sound. (3-3) Seminar, three hours. Requisites: courses 405, 409, 410A, 410B, 410C, 433. Limited to and required of first-year M.F.A. production program students. Exploration of principal concepts of film and television production within context of preproduction, production, and postproduction, providing forum for synthesis of knowledge gained in various first-year technical craft courses. Exploration of strategies for learning production within academic environment. May be repeated for credit. Letter grading.
411. Survey of Multimedia Production. (4) Lecture, three hours; laboratory, three hours. Introduction to various aspects of multimedia production, with emphasis on photo manipulation, desktop nonlinear postproduction, and distribution on World Wide Web. Letter grading.

C416. Intermediate Cinematography. (4) Lecture, two hours; laboratory, four hours. 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.

417. Lighting for Film and Television. (4) Lecture, two hours; laboratory, six hours. Limited to graduate film and television students. Lectures, supervised exercises on stage or in exterior, screenings of scenes, and discussions aimed at learning to master lighting to create appropriate mood or atmosphere of premeditated scene recorded on film or through electronic system. May be repeated twice for credit. Letter grading.

418. Cinematography and Directing. (4) Lecture, two hours; laboratory, six hours. Requisite: course 417. Limited to graduate film and television students. Supervised filming of short dramatic projects on sound stages or exterior locations. Focus on developing complex processes of effect, balancing or collaborating 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. Concurrently scheduled with course C120. 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 a dramatic film. Exercises in analysis of script and character, for purpose of directing actors in film and television productions. Emphasis on eliciting best possible performance from actors. May be repeated twice for credit. 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 on stage and in camera. Emphasis on developing techniques to immediately enhance communication between director and actor on set in order to maintain continuity from shot to shot. S/U or letter grading.


431. Introduction to Film and Television Screenwriting. (4) Lecture, three hours. Limited to graduate film and television students. Introduction course in principles of film and television screenwriting. S/U or letter grading.


434. Advanced Screenwriting. (8) Discussion, three hours; laboratory, four hours. Advanced problem in writing of original film and television screenplays. May be repeated twice for credit. Letter grading.

435. Advanced Writing for Short Film and Television Screenplays. (4) Discussion, three hours. Requisite: course 410C. Limited to graduate film and television students. Conception, development, and writing of dramatic film script to be produced as assigned or thesis project. Letter grading.

437. Nontheatrical Writing for Film and Television. (4) Lab. Limited to graduate film and television students. Advanced problems in field of documentary and special feature programs, 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) Lab, to be arranged. Limited to graduate film and television students. Advanced study and practice of techniques and methods of design for motion picture, television, or video 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.

452B. Music Recording Workshop. (4) Lecture, four hours. Limited to graduate film and television students. Introduction to music recording techniques for electronic music recording techniques, with emphasis on special requirements for motion pictures and television. S/U or letter grading.

452C. Digital Audio Postproduction. (4) Lecture, three hours. 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. Concurrently scheduled with course C120. 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 tools necessary to complete postwork on 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 for various story points, discover design opportunities, and select right sound effects. How to edit dialogue, prep for Automatic Dialogue Replacement and Foley sessions, and 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; discussion, three hours; laboratory, four hours. Fabrication of final sound mix. Introduction to digital sound design. S/U or letter grading.

454B. Advanced Film Editing. (4) Lecture, three hours; laboratory, one hour. Preparation: submission of rough cut of existing project or proposal to edit work with emphasis on interplay of dialog, editing of scenes with composers, with weekly sessions dedicated to timing, creation and development of new scores, studio visits, and creative/conceptual dialogue between filmmaker, composer, and other music producers. Preparation of film ready for timing 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. Limited to graduate film and television students. Analysis and exploration, with specific scenes, of different similarities in directorial approach to same literary material in theatrical, film, and television. S/U or letter grading.


466A-466B. Advanced Professional Video Workshops. (8-8) Lecture, three hours; laboratory, to be arranged. Requisites: courses 410A, 410B, 410C. Advanced to graduate film and television students. Hands-on problems in working with various interrelated disciplines in professional production experience, including interaction with students of design and acting from Department of Theater. Letter grading.

468. Creative Location Film Production. (8) Lecture, four hours; discussion, four hours; laboratory, to be arranged. Limited to M.F.A. production 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 C168. Letter grading.

470A. 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 is marketable in American and foreign markets and how 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 various techniques of production, processing, and preproduction planning and production of group short film. S/U or letter grading.

476. Video I. (8) Discussion, three hours; laboratory, to be arranged. Designed for graduate students. Study of various techniques of production, processing, and preproduction planning and production of group short film. S/U or letter grading.

480. Editing 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. Designed for graduate students. Advanced problem in conception, development, 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 grading.

483A-483B-483C. Advanced Computer Animation. (4 to 8 each) Lecture, six hours; laboratory, four hours. Requisites: courses 181A, 181C, 482A. Recommended: course 181B. Course 483A is requisite to 483B, which is requisite to 483C. Creation and production of complete and original advanced computer animated film. Letter grading.

484A-484B. Visual Thinking and Organization for Animation. (4-4) Lecture, six hours; laboratory, four hours. Course 484A is requisite to 484B. Systematic approach to 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, competing rights, employer/employee relationships, and representation in animation. S/U or letter grading.

486. Directed Individual Study: Preparation to Advance to 488A in Production. (1 to 6) 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 term before student plans to advance to candidacy. S/U or letter grading.


488A. Interactive Animation. (4 to 8) Lecture, six hours; laboratory, to be arranged. Requisites: courses 181A, 181C, 489A. Organization and integration of various creative arts used in animation and interactive media to form complete study of selective interactive animation project. May be repeated for maximum of 16 units. Letter grading.

488B. Advanced Interactive Animation. (4 to 8) Lecture, six hours; laboratory, to be arranged. Requisite: course 488A. Organization and integration of various strong creative arts used in animation and interactive animation to form complete project of selected interactive. Active may be repeated for maximum of 16 units. Letter grading.

489A. Computer Animation in Film and Video. (4 to 8) Lecture, four hours; laboratory, four to eight hours; tutorial, to be arranged. Preparation: completed animated film. Requisites: courses 181A, 181C, Instruction in and supervised production of computer animation. May be repeated for maximum of 16 units. Letter grading.

489B. Production in Computer Animation. (4 to 8) Lecture, six hours; laboratory, four to eight hours. Requisite: course 489A. Instruction in creation, preparation, and production of complete and original computer animation film or tape. May be repeated for maximum of 16 units. Letter grading.

495A. Practice of Teaching Film and Television. (2) Seminar, three hours. How to use appropriate technology to become more effective teaching assistants. Pedagogical impact of tools, including course management software, presentation technologies, 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.

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 technologies, 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 in department; discussion of problems common to teaching experience. May not be applied toward M.A., M.F.A., or Ph.D. May be repeated. S/U grading.

497. Professional Internship in Film and Television. (4, 8, or 12) Tutorial, to be arranged. Full- or part-time at studio or on professional project. Designed for M.F.A. program advanced students. Internship at various film, television, or theater facilities accentuating creative contribution, organization, and work of professionals in their various specialties. Given only when projects can be scheduled. S/U or letter grading.

501. Cooperative Program. (2 to 8) Tutorial, to be arranged. Preparation: consent of graduate 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.

505A. Directed Individual Studies: Research. (2 to 12) Tutorial, to be arranged. Limited to graduate students. May be repeated with consent of instructor. S/U or letter grading.

506B. Directed Individual Studies: Writing. (2 to 12) Tutorial, to be arranged. Limited to graduate students. May be repeated with consent of instructor. S/U or letter grading.

506C. Directed Individual Studies: Directing. (2 to 12) Tutorial, to be arranged. Limited to graduate students. May be repeated with consent of instructor. S/U or letter grading.

506D. Directed Individual Studies: Design. (2 to 12) Tutorial, to be arranged. Limited to graduate students. May be repeated with consent of instructor. S/U or letter grading.

506E. Directed Individual Studies: Acting. (2 to 12) Tutorial, to be arranged. Limited to graduate students. May be repeated with consent of instructor. S/U or letter grading.

506F. Directed Individual Studies: Production. (2 to 12) Tutorial, to be arranged. Limited to graduate students. May be repeated with consent of instructor. S/U or letter grading.

507. Preparation for Ph.D. Qualifying Examinations in Film and Television. (2 to 12) Tutorial, to be arranged. May be repeated with consent of instructor. S/U or letter grading.


FOREIGN LITERATURE IN TRANSLATION

Scope and Objectives

The following courses offered in the departments of language and literature do not require reading knowledge of any foreign language.

Foreign Literature in Translation

Course List

Afrikaans (Germanic Languages)

40. From Oppressed to Oppressor and Beyond: Literature in Afrikaans from Preapartheid to Postapartheid Era in English Translation

Arabic (Near Eastern Languages)

150A-150B-150C. Survey of Ancient Near Eastern Literatures in English

Armenian (Near Eastern Languages)

150A-150B. Survey of Armenian Literature in English

C152. Modern Armenian Drama as Vehicle for Social Critique

Asian Languages

151. Buddhist Literature in Translation

Central and East European Studies (Slavic Languages)

126. Coldwar Central European Culture

Chinese (Asian Languages)

C150A. Lyrical Traditions

C150B. Chinese Literature in Translation: Traditional Narrative and Fiction

C151. Chinese Literature in Translation: Modern Literature

Comparative Literature

152. Topics in Contemporary Chinese Literature and Culture

M153. Chinese Immigrant Literature and Film

Classics

40W. Reading Greek Literature: Writing-Intensive

41W. Reading Roman Literature: Writing-Intensive

137. Ancient Lives: Art of Biography

140. Topics in History of Greek Literature

141. Topics in History of Latin Literature

142. Ancient Epic

143A, 143B. Ancient Tragedy

144. Topical Studies in Ancient Culture

M145A. Ancient Greek and Roman Philosophy

M145B. Later Ancient Greek Philosophy

M146A. Plato — Earlier Dialogues

M146B. Plato — Later Dialogues

147. Aristotle

150A. Female in Greek Literature and Culture

150B. Female in Roman Literature and Culture

162. Classical Myth in Literature

163. Ovid and Consequences

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

111C. Topics in Biblical Literature

112A. Oral Tradition
French and Francophone Studies / 357

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.

The French major is a designated capstone major. Students are required to complete a capstone seminar that is thematically devised to reflect current trends in the discipline. Through the capstone experience, students work closely with a faculty member on a focused topic of research. They engage in presentations and weekly discussions and write a research paper demonstrating language proficiency, critical and creative thinking, analytical skills, and a cultural perspective.

French B.A.

Capstone Major

Preparation for the Major

Required: French 1, 2, 3, 4, 5, 6, 12, or equivalent. Students normally take course 6 before undertaking course 12. Students who receive a grade of A in course 5 may enroll in course 12 concurrently with course 6, with consent of the instructor.

Transfer Students

Transfer applicants to the French major with 90 or more units must complete the following introductory courses prior to admission to UCLA: two years of French and one French literature course.

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, one senior capstone seminar (191B), and six 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 adviser. Each course must be taken for a letter grade.

Plan II: Interdisciplinary French/ Francophone Studies

Required: French 100, 101, one course from 114A, 114B, or 114C, one senior capstone seminar (191B), four upper division elective courses in French and Francophone studies, and three upper division elective courses in fields relevant to French and Francophone studies to be selected from outside the department in consultation with the undergraduate adviser. Each course must be taken for a letter grade.

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, gender 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 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 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 diploma are not to be confused). Honors thesis (honors projects and the honors diploma) writing of their approximately 30- to 35-page honors thesis are not to be confused). Honors thesis (honors projects and the honors diploma are not to be confused).

Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website, http://grad.ucla.edu/gradreg. 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.
1G. Elementary French for Graduate Students. (3) Lecture, three hours. Preparation for GSFLT or other language examinations. Passing grade does not imply satisfaction of language requirements. S/U grading.
2. Elementary French. (4) Lecture, five hours. Enforced requisite: course 1 with grade of C– or better. P/NP or letter grading.
3. Elementary French. (4) Lecture, five hours. Enforced requisite: course 2 with grade of C– or better. P/NP or letter grading.
7. Intensive First-Year French. (12) Lecture, 15 hours. All-in-French intensive language program equivalent to first year of college French and designed to develop basic language skills. Additional work in language and media laboratory required. Offered in summer only. P/NP or letter grading.
8. Intensive Second-Year French. (8) Lecture, 10 hours; media laboratory, three hours. Enforced requisite: course 3. Intensive course equivalent to first two terms of intermediate French and designed to improve proficiency in reading, writing, and speaking. Offered in summer only. P/NP or letter grading.
10A-10D. French Conversation. (2 each) Discussion; three hours. Enforced requisite: course 3 with grade of B or better. P/NP or letter grading.
14. Introduction to French Culture and Civilization in English. (5) Lecture, three hours; discussion, one hour. Not open for credit with course 14W. Study of contemporary French institutions and issues in cultural, political, and socioeconomic realms. P/NP or letter grading.
14W. Introduction to French Culture and Civilization in English. (5) Lecture, three hours; discussion, one hour. Enforced requisite: English Composition 3 or 3H or English as a Second Language 36. Not open for credit with students with credit for course 14. Study of contemporary French institutions and issues in cultural, political, and socioeconomic realms. Satisfies Writing II requirement. Letter grading.
41. French Cinema and Culture. (5) Lecture/screenings, five hours; discussion, one hour. Introduction to French culture and literature through study of films of cultural and literary significance. P/NP or letter grading.
60. French and Francophone Novel. (5) Lecture, three hours; discussion, one hour. Study of literary masterpieces produced by writers from France and Francophone world (Canada, Africa, Caribbean, etc.) from 17th to early 21st century. P/NP or letter grading.

Upper Division Courses

104. Theory and Correction of Diction. (4) Formerly numbered 15.) 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 pronunciation changes 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. (4) Lecture, three hours; discussion/film screenings, two hours. Medieval texts, culture, social structure, and political history as they lay bases of European 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 (Chretien de Troyes and Renaissance poetry) and poetry (including Marot, Du Bellay, Ronsard, Rabelais, Marguerite de Navarre, and Montaigne). P/NP or letter grading.

114B. 17th and 18th Centuries. (5) Lecture, three hours. Requisite: course 12. Study of major literary movements and writers of period, including works by Hugo, Baudelaire, Balzac, Stendhal, Flaubert, Zola, Gide, Proust, Cocteau, Robbe-Grillet, and Durand. P/NP or letter grading.

115. Studies in Medieval French Culture and Literature. (4) Lecture, three hours. Enforced requisite: course 5. Taught in French. Study of medieval French culture and literature, including lyric poetry and narrative romance, history of medieval 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 la Pléiade and 16th-century poetry, linguistic and poetic evolution, novel and early prose, and late French humanism. May be repeated for credit with topic change. P/NP or letter grading.

117. Studies in 17th-Century French Culture and Literature. (4) Lecture, three hours. 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 philosophes, sentimentalists, and the theoretical writings. 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 the surrealists, surrealism, literature from 1915 to 1945, post-World War II literature, existentialism, new novel, theater, and poetry. May be repeated for credit with topic change. P/NP or letter grading.

121. Studies in Francophone Cultures and Literature. (4) Lecture, three hours. Enforced requisite: course 5. Taught in French. Study of Francophone cultures and literatures, including works by poets, playwrights, novelists, essayists, and philosophers from Caribbean, North Africa, Quebec, and sub-Saharan Africa, immigrant narratives, and colonialism and postcolonial studies. May be repeated for credit with topic change. P/NP or letter grading.


136. Contemporary French Theory. (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. Taught in French. Study of French theorists (Barthes, Baudrillard, Clough, Derrida, Foucault, Irigaray) and major concepts in contemporary French thought, with attention to its influence on and application to literary and nonliterary texts. May be repeated for credit with topic change. P/NP or letter grading.


141. French Cinema. (4) Lecture, three hours. Study of French cinema and cinematographers in general, 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 cinema (Africa, Caribbean, postcolonial communities in France) and cinematographers in generic, thematic, and sociocultural aspects. May be repeated for credit with topic change. P/NP or letter grading.

143. French and Francophone Novels in Translation. (4) Lecture, three hours. Study of French novels. May be repeated for credit with topic change. P/NP or letter grading.


191A. Variable Topics Research Seminars in Translation. (4) Seminar, three hours. Limited to juniors/seniors. Supervised individual research or investigation under guidance of faculty mentor. Culminating project. May be repeated for credit with consent of major advisor. P/NP or letter grading.

191B. Variable Topics Research Seminars. (4) Seminar, three hours. Taught in French. Research seminar 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 advisor. 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 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 French. (2 to 4) Tutorial, three hours. Limited to juniors/seniors. Supervised individual research or investigation under guidance of faculty mentor. Culminating paper or project required. May be repeated for credit. Individual contract required. P/NP or letter grading.
Graduate Courses


201. Techniques of Literary Analysis. (4) Lecture, three hours. Practice in close analysis of literary texts, including 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 postmodernization, Algerian War, May 68, and beyond. Theorists include Barthes, de Certeau, Bourdieu, Baudrillard, Lyotard, Ross, Rey Chow, Virilio. S/U or letter grading.

203. Contemporary Francophone Literature. (4) Lecture, three hours. Study of Francophone African, Caribbean, Vietnamese, or Quebec literatures and cultures, with specific attention to issues of cultural contact, language, colonialism, anticolonialism, nationalism, resistance and dissidence, and postcolonial theory. S/U or letter grading.

204. Studies in Autobiography. (4) Lecture, three hours. Introduction to theories of autobiography and subjectivity, and to genre of autobiography in literatures in French across centuries. Topics include early modern approaches to self-writing, Rousseau and emergence of modern self, women’s autobiography in France and Francophone world. Theorists may include Georges Gusdorf, Philippe Lejeune, Paul de Man, Jacques Derrida, Helene Cixous, Michel Foucault, Pierre Bourdieu, Toril Moi. S/U or letter grading.

205A-205B. Studies in Cinema and Literature. (4-4) Lecture, three hours. Discussion of selected topics in French and Francophone cinema and literature. S/U or letter grading.

206A-206B. Studies in Generative Anthropology. (4-4) Lecture, three hours. Discussion of principles of generative anthropology and their application to given set of literary, philosophical, and scientific texts and/or other cultural phenomena. S/U or letter grading.

207. Studies in History of Ideas. (4) Seminar, three hours. Particular problems in French literature and ideas. May be repeated for credit. S/U or letter grading.

208. Studies in Literary Criticism. (4) Seminar, three hours. Readings in literary criticism, theory, and literature from any period of French literature. May be repeated for credit. S/U or letter grading.

209. Studies in Literary Genre. (4) Seminar, three hours. Advanced research and study of literary genres such as poetry, drama, fiction, autobiography, or performance and of theory of these genres. S/U or letter grading.

M210. Paleography of Latin and Vernacular Manuscripts, to 1500. (4) Same as Classics M218, English M215, and History M218. Lecture, three hours; discussion, two hours. Introduction to history of Latin and vernacular manuscript book from 900 to 1500. Trains students to make informed judgments with regard to place and date of origin, to provide training in accurate reading and transcription of later medieval scripts, and to examine manuscripts as witness to changing society that produced them. 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-professional exchange in medieval and early modern periods and France’s role in it. S/U or letter grading.


220. 20th Century. (4) Lecture, three hours. Overview, both historical and analytical, of 20th-century French literature set in context of several key critical topics that interrogate canonical interpretation. Letter grading.

M270. Seminar: Literary Theory. (8) (Same as as M251, Comparative Literature M254, English M270, German M270, Italian M270, Scandinavian M270, and Spanish M294.) Seminar, three hours. Advanced interdisciplinary seminar to explore philosophical, historical, and critical foundations of literary theory as well as current issues in literary and cultural studies. S/U or letter grading.

296. Research Methods and Writing. (2) Seminar, two hours. Advanced study of current topics in literary and cultural analysis and in critical theory. Discussion of current research and literature in research specialty of faculty member teaching course. S/U grading.

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 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 French at College Level. (4) Seminar, three hours; discussion, one hour. Designed for graduate students. Theory and practice of language teaching. S/U grading.

596. Directed Individual Studies or Research. (2 to 4) Tutorial, to be arranged. S/U or letter grading.

597. Preparation for M.A. Comprehensive Examination or Ph.D. Qualifying Examinations. (2 to 8) Tutorial, to be arranged. May be repeated for maximum of 16 units. S/U grading.

598. Research for and Preparation of M.A. Thesis. (2 to 4) Tutorial, to be arranged. Maximum of 4 units may be applied toward M.A. degree requirements. 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.uei.ucla.edu/clusters.htm

M. Gregory Kendrick, Ph.D., Director

Faculty Committee
Joel D. Aberbach, Ph.D. (Political Science, Public Policy)
Scott H. Chandler, Ph.D. (Integrative Biology and Physiology)
M. Gregory Kendrick, Ph.D. (History)
Christopher M. Kelty, Ph.D. (Information Studies, Institute for Society and Genetics)
James E. Larkin, Ph.D. (Physics and Astronomy)
Joseph F. Nagy, Ph.D. (English)
Janice L. Reff, Ph.D. (History, Statistics)
Brenda Stevenson, Ph.D. (History)
Keith D. Stolzenbach, Ph.D. (Civil and Environmental Engineering, Institute of the Environment and Sustainability)

Scope and Objectives

Available to entering freshmen only, cluster courses are an option for satisfying both general education and Writing II requirements. Clusters are yearlong, collaboratively taught, interdisciplinary courses that focus on a topic of timely importance, such as the global environment or intercultural 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 40 percent 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.uei.ucla.edu/clusters.htm

General Education Clusters

Lower Division Courses

M1A-M1B-M1CW. Environment and Sustainability. (3-4-3) (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. M1A-M1B. 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. M1CW, 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. Limited to first-year freshmen. Letter grading. M20A-20B-20CW. Intercultural Dynamics in American Culture and Society. (6-6-6) Course 20A is enforced requisite to 20B, which is enforced requisite to 20CW. Limited to first-year freshmen. Letter grading. 20A-20B. Lecture, three hours; discussion, two hours. Examination of nature and meaning of race in American society through study of history, literature, and law. Consideration, among other topics, of construction of race as social and cultural category among two or more groups and exploration of ways in which race has shaped understanding of American citizenship. 20CW, Special Topics. Seminar, three hours. Enforced requisite: course 20B. Consideration of how experience, debates, and issues of race are represented and understood in historical, legal, cinematic, and literary contexts. Satisfies Writing II requirement.

21A-21B-21CW. History of Modern Thought. (6-6-6) Course 21A is enforced requisite to 21B, which is enforced requisite to 21CW. Limited to first-year freshmen. Letter grading. 21A-21B. Lecture, three hours; discussion, two hours. Examination of cross-section of classical and modern social theories and debates that shape them. Satisfies Writing II requirement.

22A-22B-22CW. Toward World Economy: Perils and Promise. (6-6-6) Course 22A is enforced requisite to 22B, which is enforced requisite to 22CW. Limited to first-year freshmen. Letter grading. 22A-22B. 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. 22CW, Special Topics. Seminar, three hours. Enforced requisites: course 22B, and English Composition 3 or 3H or English as a Second Language 36. Topics may include globalization and orality, myth and political ideology, myth and modern art. Topics related to course theme to allow them to study, discuss, and then generate policy solutions to create more equitable healthcare in Latin America. Focus on one particular area of Latin America or one local Latin American community to reflect field study sites to eventually be offered and serve as preparation for summer field study component. Satisfies Writing II requirement.

30A-30B-30CW. Never-Ending Stories: Multidisciplinary Perspectives on Myth. (6-6-6) Course 30A is enforced requisite to 30B, which is enforced requisite to 30CW. Limited to first-year freshmen. Letter grading. 30A-30B. Lecture, three hours; discussion, two hours. Exploration in 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. Enrolled in 30CW. Special Topics. Seminar, three hours. Enforced requisite: course 30B. Topics may include myth and modern art (including literature, music, and film), myth and ritual, orality and politcal 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. (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. Exploration of change over last major interval in which sexual and gender identity shape and are shaped by social and cultural forces, including gender, sexual orientation, and race and ethnicity. Topics may include historical perspectives on diversity of women, racial minorities, and sexual minorities in contemporary society. Satisfies Writing II requirement.

66A-66B-66CW. Los Angeles: The Cluster. (6-6-6) Course 66A is enforced requisite to 66B, which is enforced requisite to 66CW. Limited to first-year freshmen. Letter grading. 66A-66B. Lecture, three hours; discussion, two hours. In-depth exploration of Los Angeles, Los Angeles as global city, Los Angeles in fiction, Southern California and environment, planning for 21st-century Los Angeles, and housing and homelessness in Los Angeles. 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 70D. Limited to first-year freshmen. Letter grading. 70A-70B. Lecture, three hours; discussion, two hours. Use of concept of evolution, as it applies to biological organisms, Earth, society, and technology. Satisfies Writing II requirement.

71A-71B-71CW. Biotechnology and Society. (5-5-5) Course 71A is enforced requisite to 71B, which is enforced requisite to 71CW. Limited to first-year freshmen. Letter grading. 71A-71B. Lecture, three hours; discussion, two hours; laboratory, two hours. Exploration of methods, applications, and implications of biotechnology and related fields, and political implications as well as biological underpinnings. 71CW. Special Topics. Seminar, three hours. Enforced requisite: course 71B, and English Composition 3 or 3H or English as a Second Language 36. Topics include in-depth examination of ethics and human genetics, bioweapons and biodefense, sex and biotechnology. Satisfies Writing II requirement.

72A-72B-72CW. Sex from Biology to Gendered Society. (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. In-depth examination of ethics and human genetics, bioweapons and biodefense, sex and biotechnology. Satisfies Writing II requirement.
Scope and Objectives

The Department of Gender 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 gender studies curriculum challenges the pervasive theory/practice divide within the academy. In both undergraduate and graduate courses, students are taught a broad range of methodological and analytical skills. Core undergraduate courses contextualize foundational theoretical and key analytic concepts within the study of different historical periods and social movements. In designing these courses, Power, Knowledge, and Bodies, the department identifies three primary areas in which feminist and queer inquiry has been concentrated over time, enabling students to trace grounding concepts, key controversies, and the emergence of new theoretical paradigms.

The department has long enjoyed recognition for its strengths in areas including women’s history, feminist science studies, and gender and the law. Over the past several years, it has become a leading program for interdisciplinary intersectional feminist scholarship on gender, sexuality, race, class, and nationality and is building a strong reputation in the areas of transnational literary and media studies, postcolonial feminist studies, studies of settler colonialism, feminist science studies, feminist policy studies, queer of color critique, and women of color feminism.

Undergraduate Study

Gender Studies B.A.

The major in Gender Studies may be taken alone or in conjunction with another Letters and Science major. In the case of a double major, no more than five courses may be applied toward both majors.

Admission

To be admitted to the major, students must have completed Gender Studies 10, be in good standing, and formally register with the department. They are encouraged to declare their major as early as possible and to discuss their proposed course of study with the undergraduate adviser.

Students are encouraged to draw on 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 gender studies approved list, students may petition to have diverse courses accepted, including courses outside the College of Letters and Science, independent studies, or field study courses.

Each course applied toward the major must be taken for a letter grade, and students must have a grade-point average of 2.0 or better in gender studies courses to receive credit for completing the program. Courses in which they receive grades of C– or lower may not be applied toward the required courses in the major.

Preparation for the Major

Required: Gender Studies 10. Students must also complete departmental lower division requisites, as applicable, for upper division gender studies courses.

Transfer Students

Transfer applicants to the Gender Studies major with 90 or more units must complete the following introductory courses prior to admission to UCLA: one multidisciplinary gender studies course and departmental lower division requisite courses.

Refer to the UCLA Transfer Admission Guide at http://www.admissions.ucla.edu/prospect/admtr.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 (2) provide exposure to a range of feminist and queer scholarship across disciplines. To achieve these goals, the major is divided into three categories.

Required for Students Who Entered Prior to Fall Quarter 2011: At least 11 upper division courses (minimum of 4 units each) as follows: (1) two core courses selected from Gender Studies 102, 103, 104, M110C, 130, or former courses 110A and 110B, (2) eight elective courses; one upper division tutorial (minimum of 4 units) selected from course 195, 197, or 198 may be applied toward the elective requirement (this limit does not apply to course 198A or 198B), and (3) course 187 (capstone seminar).

Required for Students Who Entered Fall Quarter 2011 and Thereafter: At least 11 upper division courses (minimum of 4 units each) as follows: (1) three core courses — Gender Studies 102, 103, 104, (2) seven elective courses; one upper division tutorial (minimum of 4 units) selected from course 195, 197, or 198 may be applied toward the elective requirement (this limit does not apply to course 198A or 198B), and (3) course 187 (capstone seminar).

Honors Program

The honors program is open to advanced junior and senior Gender Studies majors with a 3.6 grade-point average in gender studies courses and a minimum 3.4 overall GPA who have no outstanding Incomplete grades, and to majors who demonstrate ability to do honors work by submitting a paper to the department chair for approval.
Gender Studies

Gender Studies Minor

The Gender Studies minor augments and enriches study in a traditional field. Students participating in this program are required to complete both a departmental major and the Gender Studies minor.

To enter the minor, students must have an overall grade-point average of 2.0 or better and formally register with the department undergraduate advisers in 1120 Rolfe Hall. They are encouraged to declare the minor as early as possible.

Required Lower Division Course (5 units): Gender Studies 10. Students must also complete departmental lower division requirements, as applicable, for upper division gender studies courses.

Required Upper Division Courses (24 units): (1) One core course from Gender Studies 102, 103, or 104, (2) 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 gender studies course list. No more than 4 units of courses 195 through 199 may be applied.

A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor.

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://grad.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 Gender Studies Department offers Master of Arts (M.A.) and Doctor of Philosophy (Ph.D.) degrees in Gender Studies.

Gender Studies

Lower Division Course

10. Introduction to Gender Studies. (5) Lecture, three hours; discussion, one hour. Introduction to key concepts in the study of gender. Exploration of topics such as gender socialization, body image, sexuality, masculinities, and women's subordination. Special emphasis on interaction of gender with other identity markers such as race, nation, ethnicity, class, and other differences. P/NP or letter grading.

Upper Division Courses

102. Power. (4) Lecture, three hours. Enforced requisite: course 10. Consideration of how feminist social movements have identified and challenged gender-based subordination and ways feminist theorists have conceived and critiqued traditional theories of power. How have women's and other social movements defined and challenged social, political, and economic subordination? How have feminist theorists addressed subject of power? How do empire, colonialism, liberalism, neoliberalism, and globalization produce distinctive forms of gendered violence, gendered knowledge, and gendered subjectivities? How are gender and sexuality produced and regulated by law, nation, and economy? P/NP or letter grading.


104. Bodies. (4) Lecture, three hours. Enforced requisite: course 10. Exploration of scholarly theories and histories of body, with focus on topics such as sex identities, sexuality, gendered violence, and reproductive politics. How has science, medicine, and culture sought to distinguish male from female in different historical periods and locations? How have conceptions of terms sex and gender varied across time and place? How has gendered body been represented in different visual cultures? How have embodied identities been produced in different historical and geographic contexts? What is relationship between embodiment and desire? P/NP or letter grading.

104C. 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 aging population and variability in aging process. Examination of gender and ethnicity within context of both physical and social aging, in multidisciplinary perspective utilizing faculty from variety of fields to address issues of diversity. Letter grading.

105. Topics in Women and Medicine. (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 woman's health as a lifelong process: and ways to deliver healthcare to women. Exploration of roles and lifestyles of female physicians. P/NP or letter grading.

105A. Premodern Queer Literatures and Cultures. (5) (Same as English M105A and Lesbian, Gay, Bisexual, and Transgender 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 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.

105B. Queer Literatures and Cultures, 1850 to 1970. (5) (Formerly numbered 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.

105C. Queer Literatures and Cultures after 1970. (5) (Formerly numbered Women's Studies M105B.) 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 Holleman, Leslie Feinberg, Achy Obejas, Essex Hemphill, Audre Lorde, Cheryl Dunev, and Alison Bechdel may be included. May be repeated for credit with topic or instructor change. P/NP or letter grading.

105D. Studies in Queer Literatures and Cultures. (5) (Formerly numbered Women's Studies M105C.) Lecture, four hours; discussion, one hour (when scheduled). 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.

106. Imaginary Women. (5) (Same as Honors College M106.) Seminar, four hours; discussion, one hour (when scheduled). May be repeated for credit with topic or instructor change. P/NP or letter grading.

107A. Studies in Women's Writing. (5) (Formerly numbered 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 emphasis, with possible topics such as authorship, selfhood, sexuality, gender, and identity. May be repeated for credit with topic or instructor change. P/NP or letter grading.

107B. Studies in Gender and Sexuality. (5) (Same as Women's Studies M107B prior to Fall Quarter 2011.) (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 intersectional vectors of identity and representation such as race, class, and ethnicity. May be repeated for credit with topic or instructor change. P/NP or letter grading.

108. Love and Sex in German Literary Tradition. (4) (Same as German M108.) 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) Lecture, three hours. Enforced requisite: course 10. Factual information and theoretical analyses regarding various forms of violence against women and girls in their homes, workplaces, and communities through critical examination of social structures and social science research. Letter grading.
M109. Women in Jazz. (4) (Same as Afro-American Studies M109 and Ethnomusicology M109.) Lecture, four hours; discussion, one hour. Sociocultural history of women in jazz and allied musical traditions from 1880s to present. Survey of women vocalists, instrumentalists, composers/arrangers, and producers and their impact on development of jazz. P/NP or letter grading.

M110C. Philosophical Analysis of Issues in Feminist Theory. (4) (Same as Philosophy M187.) Lecture, three hours. Requisite for Gender 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 contribution of feminist philosophers. Enforced prerequisite: one hour. 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 prior lesbian, gay, bisexual, and transgender studies course. History of sexual and gender minorities in U.S. Topics include changing norms, romantic friendships, medical discourse, liberation politics, post-Stonewall culture, AIDS, transgender movement, queer theory, and politics. P/NP or letter grading.

M119. Tristan, Isolde, and History of Heterosexuality. (4) (Same as German M105.) Lecture, three hours. Taught in English. German, French, and English versions of Tristan and Isolde 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.

120. Internship in Gender Studies. (4) Seminar, three hours; internship, eight hours minimum. Preparation: at least two upper division gender studies core courses and approval of supervisor. Emphasis on practical experience in working on feminist issues and connecting these experiences to methodological and theoretical themes explored in gender studies core courses. P/NP or letter grading.

M121. Topics in Gender and Disabilities. (4) (Same as Disability Studies M121.) Lecture, three and one half hours. Limited to juniors/seniors. Ways in which issues of disability are affected by gender, with particular attention to various roles, positions, and concerns of women with disabilities. Approach is 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 topic and instructor change. P/NP or letter grading.

122. Masculinities. (4) Lecture, three hours. Enforced requisite: course 10. Masculinity as theorized by feminists and philosophers, sex and nation. Topics include feminist theories of masculinity, male body, childhood and adolescent socialization, sport, male violence, homophobia, black masculinity, globalization and cultural production, movements in the 1970s and beyond. Special emphasis on social sciences approaches and methodologies. P/NP or letter grading.

123. Gender, Race, and Class in Latin American Literature and Film, 1850 to 1950. Seminar, three hours. Requisite: course 10. Readings and discussion in English. Comparative survey of cultural expression in Latin America, with emphasis on works produced or set in late-19th and early-20th centuries. Historical and social circumstances of women in different Latin American cultural contexts, with particular concentration on women's roles in science, politics, and culture. Movements in Latin America in the 19th and 20th centuries. Topics include questions of authorship and authority such as women's participation in formation of national cultures, engagement with artistic movements, and strategies of contemplation and engagement. P/NP or letter grading.

125. Perspectives on Women's Health. (4) Lecture discussion, three hours. Requisite: course 10. Examination in depth of various ways women provide healthcare in both paid and unpaid capacities and of political, social, and cultural contexts in which women are recipients of healthcare. P/NP or letter grading.

M126. Feminist and Queer Theory. (5) (Same as English M126 and Lesbian, Gay, Bisexual, and Transgender Studies M126.) Lecture, four hours. Enforced requisite: course 10 or 102, 103, 104, English 120, or 121. Investigation of key concepts and debates in study of gender, sexuality, and kinase and their interrelated significance for making of culture. Readings to be interdisciplinary, with possible emphasis on impact of transhistorical ideas of gender on specific historical cultures. May be repeated with topic or instructor change. P/NP or letter grading.

M127. Women in Russian Literature. (4) (Same as Russian M127.) Lecture, three hours. Designed for juniors/seniors. Lecture/seminar, four hours. Emphasis on tropes of heroines and hero figures in Russian and Soviet Union Emphasis on images of women expressed in this tradition as compared with those found in works of contemporary male writers. P/NP or letter grading.


129. Women and Gender in Caribbean, (4) Seminar, three hours. Requisite: course 10. Exploration of ways in which gender discourses have been central to making of Caribbean history and to some most enduring experiments in European empire, capitalist development, and coercive labor. Emphasis on women who lived through slavery and indentured servitude and who continue to live under systems of globalization and neoliberal exploitation. How Caribbean women have historically engaged and their communities, working in various ways to survive, radicalize, and transform their worlds. Ways in which ideas about gender and sexuality have shaped emergence of new nations and national cultures in Caribbean, and consideration of some dominant images of women in public space and popular culture. Exploration of complicated ways in which gender, race, class, and nation are defined by women of color. P/NP or letter grading.

CM132A. Chicana Feminism. (4) Formerly numbered M132A) (Same as Chicana and Chicano Studies CM132A.) Lecture, four hours. Enforced requisite: course 10 or Chicana and Chicano Studies 10A. Examination of theories and practices of women who identify as Chicana feminist. Analysis of writings of Chicanas who do not identify as feminist but whose practices attend to gender inequities faced by Chicanas within Chicanos and dominant society. Attention to Anglo-European and Third World women. Concurrently scheduled with CM132B. P/NP or letter grading.

CM132B. Contemporary Issues among Chicanas. (4) (Same as Chicana and Chicano Studies M132B) Lecture, two and one-half hours. Requisite: course 10. Overview of conditions facing Chicanas in U.S., including issues on family, reproduction, employment conditions. Comparative analysis with other Latinas. P/NP or letter grading.

CM133. Chicana Lesbian Literature. (4) (Formerly numbered M133C) (Same as Chicana and Chicano Studies CM133 and Lesbian, Gay, Bisexual, and Transgender Studies M133.) Lecture, three hours. Exploration of intersection of radical First and Third World feminism politics, lesbian sexuality and its rela-

M133A-M133B. History of Women in Europe. (4-4) (Same as History 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. History of Women in Ancient Europe, 800 B.C. to 1715. M133B. 1715 to Present. Letter grading.

M133C. History of Prostitution. (4) (Same as History M133C) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. History of prostitution from ancient times to present. Topics include toleration in medieval Europe, impact of syphilis, birth of courtesan, regulation in 19th-century and cultural roles of women in Western Europe from early Middle Ages to present. 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 situation of women in French literature, including author, character, symbol, etc. P/NP or letter grading.

M142. Race, Gender, and Punishment. (4) Seminar, three hours. Enforced requisite: course 10. Examination of what crisis scholars have called prison industrial complex. U.S. prison population in world. How and why is this? Who is imprisoned? What historical conditions and ideologies gave rise to this massive explosion in prisoner population? Does prison function as regime? How have politicians used imprisonment as response to economic transformations and social disorders? How is current crisis analogous or to distinct from regimes of racialized punishment in prior historical moments? How do prisons change environments? How have people mobilized to reduce U.S. prison population? Why do some activists argue for reform and others for abolition? Examination of key topics, including policing and racial profiling, immigrant detention, privatization, spatial transformations, gender violence, prison spending, and political imprisonment. P/NP or letter grading.

M143C. Women's Movement in Latin America. (4) (Same as World Arts and Cultures M143C) Lecture, four 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 CM144. Letter grading.

M144. Women's Movement in Latin America. (4) (Same as Chicana and Chicano Studies M144 and Labor and Workplace Studies M144.) Lecture, four hours. Course on women's movements and feminism in Latin America. Emphasis on comparative techniques such as characterization, plot, conflict, setting, point of view, and dialogue, and magical realism as prevailing Chicanesque/Latinesque style. Some attention to process of manuscript preparation, public reading, and publication. Letter grading.

M136. Music and Gender. (5) (Same as Music History M136.) Lecture, four hours; discussion, one hour. Analysis of gender ideologies in several musical cultures; representation of body, voice, and sexuality by both male and female musicians; contributions of women to Western art and popular music; methods in feminist and gay/lesbian theory and criticism. Letter grading.

M137E. Work Behavior of Women and Men. (4) (Same as Psychology M137E) Lecture, two and one-half hours. Enforced requisite: course 10 or Psychology 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 independence of work and family roles. P/NP or letter grading.

M138. Gender and Popular Culture. (5) Lecture, three hours; screenings, two hours. Limited to juniors/seniors. Conceptual tools and critical skills necessary to rigorously interrogate gender politics of popular culture in the U.S. context. Consideration of theories of popular culture and exploration of distinctive power and ideological force exerted by popular culture in American public life. Exploration of specific representations of male and female bodies to understand visual vocabulary of gender in popular culture, as well as relationship between visual stereotypes and repressions of power. Consideration of debates concerning transformative potential of pop culture and exploration of capacity and limits of popular culture as agent of social change. Letter grading.


M140. Women's Studies in French Literature. (4) (Same as French M140.) Lecture, three hours. Exploration of selected aspect of situation of women in French literature, including author, character, symbol, etc. P/NP or letter grading.

M142. Race, Gender, and Punishment. (4) Seminar, three hours. Enforced requisite: course 10. Examination of what crisis scholars have called prison industrial complex. U.S. prison population in world. How and why is this? Who is imprisoned? What historical conditions and ideologies gave rise to this massive explosion in prisoner population? Does prison function as regime? How have politicians used imprisonment as response to economic transformations and social disorders? How is current crisis analogous or to distinct from regimes of racialized punishment in prior historical moments? How do prisons change environments? How have people mobilized to reduce U.S. prison population? Why do some activists argue for reform and others for abolition? Examination of key topics, including policing and racial profiling, immigrant detention, privatization, spatial transformations, gender violence, prison spending, and political imprisonment. P/NP or letter grading.

M143C. Women's Movement in Latin America. (4) (Same as World Arts and Cultures M143C) Lecture, four 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 CM144. Letter grading.

M144. Women's Movement in Latin America. (4) (Same as Chicana and Chicano Studies M144 and Labor and Workplace Studies M144.) Lecture, four hours. Course on women's movements and feminism in Latin America. Emphasis on comparative techniques such as characterization, plot, conflict, setting, point of view, and dialogue, and magical realism as prevailing Chicanesque/Latinesque style. Some attention to process of manuscript preparation, public reading, and publication. Letter grading.
M153. Media and Aggression against Women. (4) (Same as Communication Studies M153.) Lecture, three hours. Overview of mass media's role in global society's construction of women. Particular consideration of the media's role in the construction of gender, and the socialization and social control processes involved. Topics will include the representation of gender in the mass media, the media and aggression, and the media and the construction of national and international identities. P/NP or letter grading.


M155A. Women's Voices: Their Critique of Anthropology of Japan. (4) (Same as Anthropology M155A) Lecture, three hours. Preparation: introductory socio-cultural anthropology course. The anthropology of Japan has long viewed Japan as a homogenous whole, so as to obscure the contradictions in it by not allowing access to women's voices in the Japanese society. Offered in summer only. P/NP or letter grading.

M155Q. Women and Social Movements. (4) (Same as Anthropology M155Q) Lecture/discussion, three hours. Recommended preparation: prior gender studies or anthropology courses. Comparative studies of social movements (e.g., nationalist, socialist, liberal/ reform), beginning with Russia and China and including Cuba, Algeria, Guinea-Bissau, Mozambique, Nicaragua, and Iran. Analysis of women's participation in social transformations and the centrality of gender interests. P/NP or letter grading.

156A. 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 feminism, anti-war movements, civil rights, and women's liberation movement. Offered in summer only. P/NP or letter grading.

M157. Chicana Historiography. (4) (Same as Chicana and Chicano Studies M157 and History M151D.) Lecture, four hours. Examination of Chicana historiography, looking closely at the history of Chicana/os through the lens of Chicana/o women. Offered in summer only. P/NP or letter grading.

M158. Women, Gender, and Sexuality in Italian Culture. (4) (Same as Italian M158) Lecture, three hours; discussion, one hour. Analysis of gender roles, images of femininity and masculinity, patriarchy, myths of Madonna and Latin lover, condition of women in Italian society through history, politics, literature, film, and other media. Italian majors required to read texts in Italian. P/NP or letter grading.

M159. Pornography 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 evolutionary theory to social sciences generally. Letter grading.

M162. Sociology of Gender. (5) (Same as Sociology M162B) Lecture, three hours; discussion, one hour. Examination of the historical construction of gender in Western societies. Topics include the role of gender in social stratification, social psychological, and sociological theories of gender. P/NP or letter grading.

M163. Gender and Work. (4) (Same as Sociology M163B) Lecture, three hours. Requisite: course 10 or Sociology M161B. Examination of gendered factors in the workplace, concentrating on the U.S. experience but also including some comparative material. Particular emphasis on roles and consequences of jobs segmented 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. Title refers to intersection between politics and life cycle. Topics include social construction of gender and population, reproductive issues, politicization of mothers, motherhood, and marriage, and new reproductive technologies. Letter grading.

M165. Women, Violence, and Globalization: India, Philippines, South Korea, and Vietnam. (4) (Same as Asian American Studies M164) Lecture, four hours. Study of various forms of violence done on women not only in the context of a globalized world but also in large systems of oppression, with focus on Pilipino, Vietnamese, South Korean, and South Asian cultures. Letter grading.

M165P. Psychology of Gender. (4) (Same as Psychology M165P) Lecture, three hours. Consideration of psychological literature relevant to understanding contemporary sex differences. Topics include sex-role development and role conflict, physiological and psychological 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 Sociology M166) Lecture, three hours; discussion, one hour. Examination of women's roles and experiences in socialist societies. Topics include the communist state’s treatment of women and the impact of capitalist systems of oppression, with focus on China, Vietnam, North Korea, and South Asian cultures. Letter grading.

M167. Contemporary 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. Variable topics include identity and community; age, class, gender, and racial diversity; and analysis of contemporary issues affecting contested sexualities. Letter grading.

168. Feminist Economics in Globalizing World. (4) Lecture, four hours. Preparation: satisfaction of Letters and Science Writing II requirement. Requisite: course 10. Designed for juniors/seniors. Overview of field of feminist economics, with emphasis on development experiences 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 industrialized countries. Impact of social, psychological, and cultural forces which influence gender patterns in the labor market in different countries. Analysis of the international labor force, and poverty; examination of effects of international trade and foreign direct investment on gender roles and inequalities. Letter grading.

169. Social Development in Globalizing World. (4) Lecture, four hours. Preparation: satisfaction of Letters and Science Writing II requirement. Requisite: course 10. Designed for juniors/seniors. Overview of field of feminist economics, with emphasis on development experiences 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 industrialized countries. Impact of social, psychological, and cultural forces which influence gender patterns in the labor market in different countries. Analysis of the international labor force, and poverty; examination of effects of international trade and foreign direct investment on gender roles and inequalities. Letter grading.

M170A. History of Women in China, A.D. 1000 to Present. (4) (Same as History M170A) Lecture, three hours; discussion, one hour (when scheduled). Advanced topics in the history of women and family, with course CM170. Use of range of pedagogical approaches to understand the social, economic, and political development of women's lives in contemporary China. 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). Advanced topics in the history of women and family, with course CM170. Use of range of pedagogical approaches to understand the social, economic, and political development of women's lives in contemporary China. P/NP or letter grading.

171A. Women, Gender, and Law: Jurisprudence of Sexual Equality. (4) (Same as Psychology M171A) Lecture, course 10 or Political Science 10 or Philosophy 6 or 9. Requisite: course 101A or 110B or M110C. Exposed to historical and contemporary legal and intellectual traditions of respect, etc.—using specific problems of women (e.g., sexual harassment, pregnancy leave policy, access to legal and effective reproductive technologies) for purposes of comparison and critique. Specific focus may vary by instructor (e.g., consideration of equality theories and issues of gender differences in legal status and rights). May be repeated for credit with topic or instructor change. P/NP or letter grading.

M172A. American Women. (4) (Same as Afro-American Studies M172 and Psychology M172) Lecture, two and one-half hours. Designed for juniors/seniors. Impact of social, psychological, political, and economic forces which impact on interpersonal relationships and gender differences. Examined as women as members of large 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 historiography through state documents, autobiographical voices, and literary texts from the era of historical sources, including topics such as women and new political order (1900 to 1930), women, war, and empire (1930 to 1945), and women in consumer society (1980s to 1990s). P/NP or letter grading.

M174. Sociology of Family. (4) (Same as Sociology M174) Lecture, three hours; discussion, one hour. Theory and research dealing with modern family, its structure, and functions, including historical changes, changes in family, and the influence of reform movements on women and families. (7) Seminar, four hours; discussion, one hour. Examination of women's contributions to development of U.S. cities. Special topics. P/NP or letter grading.

CM175. Critical Media Literacy and Politics of Gender: Theory and Production. (4) (Same as Education CM175) Seminar, three hours. Corequisite: course CM175L. 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 CM278L. Letter grading.

CM178L. Critical Media Literacy and Politics of Gender: Laboratory. (2) (Same as Education CM178L) Laboratory, two hours. Corequisite: course CM178L. Hands-on production experience as integral component of course CM178. Concurrently scheduled with course CM278L. Letter grading.

CM180B. 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 sci-
en. Topics include gendered conceptions of nature, persons of man or science, roles of women in scientific revolution, and contributions of women and feminine. P/N/P or letter grading.

185. Special Topics in Gender Studies. (4) Lecture, three hours: Preparation: one prior gender studies course. Designed for juniors/seniors. Specialized or advanced study in an area within gender studies. May be repeated for credit with topic and/or instructor change. P/N/P or letter grading.

M186. Voices of Women in Nordic Literature. (4) (Same as Scandinavian CM144A) Seminar, three hours. Requisite: course 4 or 5 or 15 or 25. Knowledge of Scandinavian languages not required for non-majors. Readings and discussion of writings by Scandinavian women writers analyzed in historical, theoretical, sociological, critical, and comparative contexts. P/N/P or letter grading.

M186A. Women and Gender, Prehistory to 1792. (4) (Same as History M187A) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Specialized or advanced study in an area within gender studies. May be repeated for credit with topic and/or instructor change. P/N/P or letter grading.

M186B. Global Feminism, 1580 to Present. (4) (Formerly numbered M186B) (Same as History M187B) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Introduction to movements for women’s rights (educational, political, sociological, economic, sexual, and reproductive) around the world and over one and one-half centuries. P/N/P or letter grading.

187. Senior Research Seminar: Women’s Studies. (4) Seminar, three hours. Requisites: courses 10, and 110A or 110B or M110C. Designed for advanced junior/senior Open to all courses in degree. 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. Topics or texts created by women examined or read throughout. P/N/P or letter grading.

M191D. Topics in Queer Literatures and Cultures. (4) (Same as English M191D and Lesbian, Gay, Bisexual, and Transgender 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/N/P or letter grading.

M191E. Topics in Gender and Sexuality. (5) (Same as English M191E and Lesbian, Gay, Bisexual, and Transgender 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/N/P or letter grading.

195. Community or Corporate Internships in Women’s Studies. (2 or 4) Tutorial, eight hours. Requisites: course 110A or 110B or M110C, or two upper division gender studies courses not in 189 to 199 series. Limited to seniors. Internship is supervised setting in community agency, organization, or business approved by program. Content of work must apply gender analysis or be focused on some aspect of women’s studies. Students meet on regular basis with instructor, provide periodic reports on their experience on-site, and submit final report. Must be taken for 4 letter-graded units to be applied toward Gender Studies major or minor. May be repeated for maximum of 8 units. Individual contract with supervising faculty member required. P/N/P or letter grading.

197. Individual Studies in Women’s Studies. (4) Tutorial, four hours. Preparation: at least two upper division gender studies courses. Requisite: course 110A or 110B or M110C. Limited to juniors/seniors. Individual student’s study should have direction from at least two faculty members. Individual contract required. Letter grading.

198A-198B-198C. Honors Research in Women’s Studies. (4-4-4) Tutorial, four hours. Limited to junior/senior women studies honors program students. Three-term sequence to research and write honors thesis under direct supervision of faculty sponsor and in consultation with faculty cosponsor. Individual contract required. 198A. Requisite: course 187. Letter grading. 198B. Requisite: course 198A. In Progress grading (credit to be given only on completion of course 198C). 198C. Requisites: courses 198A, 198B. Letter grading.

199. Directed Research in Women’s Studies. (2 or 4) Tutorial, to be arranged. Preparation: at least two upper division gender studies courses, minimum 3.0 grade-point average. Requisite: course 110A or 110B or M110C. Limited to junior/senior Gender Studies majors and minors. Supervised individual research or investigation under guidance of faculty mentor on specific project within gender studies. Culminating paper or project required. May be repeated for credit. Individual contract required. Letter grading.

Graduate Courses

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 varied 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, three hours. Preparation: prior or concurrent enrollment in graduate research methods course in discipline or focus area, one or more undergraduate or graduate courses in gender studies. Requisites: courses 201, 202. Topics in advanced critique of sexist research methods, models of inclusion of women in research and theory, non sexist research methods from conception through interpretation, what constitutes feminist research, inclusiveness and assumptions, appropriate frameworks in comparative research. Supplemental readings. S/U grading.

204. Current Research in Women's Studies. (1) Seminar, to be arranged. Designed for graduate students in any discipline conducting research on women/gender-related issues. Attendance and participation in Feminist Research Seminar sponsored by Center for Study of Women; presentations in interdisciplinary women’s studies research and theory, with their significance and methodology discussed and critiqued in depth. May be repeated for credit. S/U grading.

205. Gender and Politics of Information. (4) Seminar, three hours. Designed for graduate students. Examination of gendered dimensions embedded in information technologies. Critical feminist assessment of information as resource and commodity; impact of information infrastructure 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. Women in Art and Public Policy. (4) Lecture, four hours. Designed for graduate gender studies students. Introduction to background, decision-making processes, and current debates over public policy directly affecting women in one or more major spheres of public life (e.g., work, family, political system, healthcare, legal regulation). Topics may focus on public health, political science, medicine, workplace issues, and social work. May be repeated for credit with topic or instructor change. Letter grading.

215. Topics in Study of Sexuality and Gender. (4) Seminar, three to four hours. Designed for graduate students. 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.


CM232A. Chicana Feminism. (4) (Same as Chicana and Chicano Studies CM214) Lecture, four hours. Enforced requisite: course 10 or Chicana and Chicano Studies 10A. Examination of theories and practices of women who identify as Chicana feminist. Representation of Chicanas in Chicana literature, meaning of family in Chicana lesbian lives, examination of Chicana Chicano women and Chicana Chicano studies. Concurrently scheduled with course CM132A. S/U or letter grading.

CM235. 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 Comparative Education. (4) (Same as Education M253A) Seminar, four hours. Examination of some of most influential critical theorists, including Marx, Nietzsche,
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Geography

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 neighborhoods 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 greenhouse gases and how they affect climates, culture and resource 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 information on topics that range from the settlement of new immigrants to the distribution of endangered 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 analysis of satellite photographs to look for changes in river courses and the computer modeling of shifts in global vegetation patterns and the distribution of human populations. Research is also conducted in libraries and archives, probing 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 combination of geographical/environmental perspectives and technical skills. UCLA geography students have gone on to become university scholars, school teachers, members of governmental and nongovernmental planning, development, and conservation agencies, business executives, lawyers, and specialists in geographical information analysis for government and private business. Because of its sophisticated focus on the relationship of the global to the local, geography is particularly useful for those who wish to pursue careers with an international 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:

375. Teaching Apprentice Practicum. (1 to 4) Seminar, to be arranged. Preparation: apprentice personnel, with consent as teaching assistant, associate, or fellow. Requisite or corequisite: course 495. Teaching apprenticeship under active guidance and supervision of regular faculty member responsible for curriculum and instruction at UCLA. May be repeated for credit. S/U or letter grading.

495. Feminist Pedagogy. (2) Seminar, two hours. Preparation: appointment as teaching assistant in department. Introduction to feminist methods of teaching, with emphasis on reciprocity and dialogue and de-emphasis on hierarchy. Required of students while serving as teaching assistants (first time only) in undergraduate gender studies courses. May be repeated for credit. S/U grading.

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 Examination or Ph.D. Qualifying Examinations. (2 to 12) Tutorial, eight hours. Limited to graduate gender 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.


GEOGRAPHY

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Stanley W. Trimble, Ph.D.
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Associate Professors
Stephen A. Bell, Ph.D.
Lieba A. Faier, Ph.D.
Yongwei Sheng, Ph.D.
Michael E. Shin, Ph.D.

Assistant Professors
Daniela F. Cusack, Ph.D.
Lisa Kim Davis, Ph.D.
Jamie M. Goodwin-White, Ph.D.
Adam D. Moore, Ph.D.

Adjunct Assistant Professor
Thomas H. Painter, Ph.D.

Freud, Marcouse, Foucault, Fanon, and de Beauvoir and their contributions to critique of contemporary education, society, and politics. S/U or 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 analytical categories involved or are gender movements different? 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, three hours. 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 Perspective. (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 ethnography of gender and sexuality, (de)construction of messages of resistance, and gender representation to gendered 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, ideational systems, and social inequalities. Seminar covers ethnographic cases from recent literature. S/U or letter grading.

M266. Feminist Theory and Social Sciences Research. (4) (Same as Education M266.) Lecture, four hours. Examination of how diverse feminist social theories of the last quarter century have both challenged and strengthened conventional social sciences theories and their methodologies. Introduction especially to feminist standpoint theory, distinctive critical theory methodology now widely used in social sciences. Letter grading.


CM278. Critical Media Literacy and Politics of Gender: Theory and Production. (4) (Same as Education CM278.) Seminar, three hours. Corequisite: course CM278L. Use of range of pedagogical approaches to theory and practice of critical media literacy that necessarily involves understanding of new technologies and media forms. Study of both theory and production techniques to inform student analysis of media and critical media literacy projects. Concurrently scheduled with course CM178, Letter grading.

CM278L. Critical Media Literacy and Politics of Gender: Laboratory. (2) (Same as Education CM278L.) Laboratory, two hours. Corequisite: course CM278. Hands-on production experience as integral component of course CM278. Concurrently scheduled with course CM178L. Letter grading.

285. Special Topics in Women’s Studies. (4) Lecture/discussion, four hours. Designed for graduate students. Selected topics or special problems. In-depth study of aspects of feminist theory or research methods or gender analysis within disciplinary studies in social sciences, humanities, health sciences, arts, or professional programs. May be repeated for credit with topic or instructor change. Letter grading.


Antony R. Orme, Ph.D.
Geography and Geography/Environmental Studies. The Geography major combines a broad background in the field with specific tracks. The Geography/Environmental Studies major focuses on the impact of humans on the natural environment. Also offered are undergraduate minors in Geography, Geography/Environmental Studies, and Geospatial Information Systems and Technologies.

The department also offers M.A. and Ph.D. degrees. Student research projects are conducted 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 combine a broad background in the field with more specific interests and career goals. Students can select classes in several areas of geography such as urban, economic, cultural, environmental, physical, or biogeography. They should consult with the undergraduate adviser to plan a program suitable to their personal objectives.

Preparation for the Major

Required: Three courses (15 units) as follows: Geography 1 or 2, 3 or 4, or 5, and Statistics 12. Each course must be taken for a letter grade.

Transfer Students

Transfer applicants to the Geography major with 90 or more units must complete as many of the following introductory courses as possible prior to admission to UCLA: one physical geography or biogeography course, one cultural geography or economic geography course, one people and ecosystems course, and one statistics course.

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. Each course must be taken for a letter grade.

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.

Geography Minor

The Geography minor is designed for students who wish to deepen and/or broaden their major program of study with a distinctive yet flexible program of courses encompassing the relationship between environment and society. The minor allows students to develop a coherent strategy for understanding and explaining the manner in which people and the Earth interact. Students have the opportunity to explore the origins, development, morphology, and processes of landscapes inherited from nature, as well as those institutions and cultural, economic, political, and social patterns associated with the human development, occupancy, organization, perception, and use of these landscapes.

To enter the minor, students must have an overall grade-point average of 2.0 or better and file a petition in the Geography Department Advising Office, 1255 Bunche Hall, (310) 825-1166. Courses should be selected in consultation with the departmental adviser.

Required Lower Division Courses (10 units): Two courses from Geography 1, 2, 3, 4, 6. It is recommended that students take these courses before attempting upper division courses.

Required Upper Division Courses (20 units): Any five upper division geography courses.

A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor, and at least three of the five upper division courses must be taken in residence at UCLA. Transfer credit for any of the above is subject to departmental approval.

Each minor course must be taken for a letter grade. Successful completion of the minor is indicated on the transcript and diploma.
Required Upper Division Courses (20 units): Three courses from the environmental studies cluster specified within the major and two geography courses from outside the environmental studies cluster.

A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor, and at least three of the five upper division courses must be taken in residence at UCLA. Transfer credit for any of the above is subject to departmental approval.

Each minor course must be taken for a letter grade. Successful completion of the minor is indicated on the transcript and diploma.

Geospatial Information Systems and Technologies Minor

The Geospatial Information Systems and Technologies minor is designed to provide students with a strong background in the use, application, and development of geospatial/environmental research techniques and methods.

To enter the minor, students must be in good academic standing, have completed Geography 7 with a grade of B 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 Upper Division Courses (10 units): Geography 7, 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.

A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor.

Each minor course must be taken for a letter grade, and students must have an overall grade-point average of 2.0 or better in the minor. Successful completion of the minor is indicated on the transcript and diploma.

Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website, http://grad.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 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 relevance to nature and distribution of landforms and climate and their significance to people. 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 shaped 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, exploration of all forms of human productive activity at number of geographical 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. Examination, 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, prehistoric, and histories. P/NP or letter grading.

7. Introduction to Geographic Information Systems. (5) Lecture, three hours; laboratory, two hours. Designed for freshmen/sophomores. Introduction to fundamental principles, concepts, and techniques to carry out sound geographic analysis with geographic information systems (GIS). Reinforcement of key issues in GIS, such as geographic coordinate systems, map projections, spatial analysis, and visualization of spatial data. Laboratory exercises use database query, manipulation, and spatial analysis to address real-world problems. P/NP or letter grading.

88A-88Z. Lower Division Seminars: Geography. (4 each) Discussion, three hours; reading, one hour. Seminars designed to explore various themes and issues pertinent to environment and people. Seminar topics advertised in department during previous term. P/NP or letter grading.


Upper Division Courses

100. Principles of Geomorphology. (4) Lecture, three hours; reading period, one hour. Requisite: course 100A. Study of processes that shape world’s landforms, with emphasis on weathering, mass movement and fluvial erosion, transport, deposition; energy and material transfers; space and time considerations. P/NP or letter grading.

100A. Principles of Geomorphology: Field and Laboratory. (2) Laboratory/Fieldwork, six hours. Corequisite: course 100. Field and laboratory investigations of weathering, mass movement, fluvial erosion, transport, deposition; related geomorphic phenomena. 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 development of coastal landforms, with emphasis on past and present changes, hydrodynamic processes, sediment transfers, and such features as beaches, estuaries, lagoons, deltas, wetlands, dunes, seascapes, and coral reefs, together with coastal zone management. P/NP or letter grading.

101A. Coastal Geomorphology: Field and Laboratory. (2) Laboratory/Fieldwork, six hours. Corequisite: course 101. Field and laboratory investigations of coastal landforms, with emphasis on past and present changes, hydrodynamic processes, sediment transfers, and such features as beaches, estuaries, lagoons, deltas, wetlands, dunes, and seascapes, togetherv with coastal zone management. P/NP or letter grading.

102. Tropical Climatology. (4) Lecture, three hours. In-depth exploration of development of tropical climate, with special reference to climate indices, ENSO, and monsoons. Examination of human interaction with tropical climate processes and human-induced climate change in tropics. Use of climatological information to foster sound environmental management of climate-related resources in tropics. P/NP or letter grading.

103. Paleoclimatology and Ice-Age Environments. (4) Lecture, three hours; discussion, one hour. Requisite: course 1. Study of past climates and their environmental impact, with emphasis on last three million years, including evidence for glacial and interglacial oscillations, historic changes, paleogeographic reconstruction, external and internal forcing mechanisms, and human implications. P/NP or letter grading.

104. Climatology. (4) Lecture, three hours; reading period, one hour. Designed for juniors/seniors. Examination of many relations between climate and world of man. Application of basic energy budget concepts to microclimates of relevance to ecosystems of agriculture, animals, man, and urban places. P/NP or letter grading.


105A. Hydrology: Field and Laboratory. (2) Laboratory/Fieldwork, six hours. Corequisite: course 105. Field and laboratory investigations into role of water in geographic systems: hydrologic phenomena in relation to climate, landforms, soils, vegetation, and cultural processes and impacts on landscape. Students solve applied hydrology problems in laboratory and make hydrologic measurements in field. P/NP or letter grading.

M106. Applied Climatology: Principles of Climate Impact on Natural Environment. (4) Same as Atmospheric and Oceanic Sciences M106. Lecture, three hours; discussion, one hour. Designed for juniors/seniors. Examination of knowledge and tools to solve complex problems in contemporary applied climatology, including current practices, influence of climate on environment, and human influence on changing climates. P/NP or letter grading.

M107. Soil and Water Conservation. (4) Same as Environmental M114. Lecture, three hours; discussion, one hour. Designed for juniors/seniors. Systematic study of processes of and hazards posed by erosion, sedimentation, and pollution and 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.

108. World Vegetation. (4) Lecture, three hours; reading period, one hour. Designed for juniors/seniors. Characteristics, distribution, environmental and cultural relationships of the world’s principal vegetation patterns. P/NP or letter grading.

M109. Human Impact on Biophysical Environment: What Science Has Learned. (4) (Same as Environment 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 three thematic topics (deforestation, desertification, and greenhouse gas increase and ozone depletion) and local, regional, biological, water, and landforms. P/NP or letter grading.

110. Population and Natural Resources. (4) Lecture, three hours; reading period, one hour. Designed for juniors/seniors. Examination of debate about environmental change and ability of planet to maintain growing population. Introduction and evaluation of basic demographic processes in context of food production, energy use, and environmental degradation. Discussion of methods used in evaluation of impact of human activity in context of increasing population in developing countries and decreasing population in Western countries. P/NP or letter grading.

111. Forest Ecosystems. (4) Lecture, three hours; field trips. Requisite: course 2 or Life Sciences 1. Designed for juniors/seniors. Evaluation of ecological principles as they apply to forests. Emphasis on constraints of physical environment, biotic interactions, succession, disturbances, and long-term environmental change. P/NP or letter grading.


113. Humid Tropics. (4) Lecture, three hours. Requisite: course 2 or 5 or Life Sciences 1. Designed for juniors/seniors. Examination of humid tropics, with emphasis on rainfall, their ecological principles, and forms of life. P/NP or letter grading.


115. Environmentalism: Past, Present, and Future. (4) (Same as Environment M132 and Urban Planning M100.) Three hours; reading period, one hour. Exploration of history and origin of major environmental ideas, movements or counter-movements they spawned, and new and changing nature of modern environmentalism. Introduction to early ideas of environment, how rise of modern sciences reshaped environmental thought, and how this was later transformed by 19th-century ideas and rise of American conservation thought. Examination 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.

116. Biogeography of Plant and Animal Invasions. (4) Lecture, three hours; reading period, one hour. Requisite: course 1 or 2 or 5. Examination of theories and examples of invasion of new environments by plants and animals introduced through natural processes or human activity. P/NP or letter grading.

M117. Ecosystem Ecology. (4) (Same as Ecology and Evolutionary Biology M131.) Lecture, three hours; field trips. Requisite: course 2 or Life Sciences 1. Designed for juniors/seniors. Development of principles of ecosystem ecology, with focus on understanding links between ecosystem structure and function. Emphasis on energy and water balances, nutrient cycling, abiotic stressors, biotic interactions, landscape heterogeneity, and human disturbance to ecosystems. P/NP or letter grading.

118. Medical Geography. (4) Lecture, three hours; reading period, one hour. Requisite: course 5. Examination of patterns of disease interactions and some effects of change and development on disease etiology and problems of healthcare. P/NP or letter grading.

119. Biophysical and Social Transformations in Northern Africa. (4) Lecture, three hours. Requisite: course 5. Substantial transformation of world’s northern high latitudes due to climate change, natural resource development, and key demographic trends. Stress on 21st-century outcomes of increased mean air temperatures and precipitation, and less ice-cover in Arctic Ocean, consistent with field observations of rising river flows, shrinking glaciers, and thawing permafrost. Ability of northern societies to react to these phenomena is shaped by new legal frameworks, like aboriginal land-claims agreements in North America, and resource economics, like oil and gas industry in Western countries, but particularly in high northern countries (including U.S.) face array of challenges and opportunities ranging from species extinctions to increased viability of shipping lanes. Major cities like Vancouver and Helsinki increasingly become places to live, emigrate, and work. Blending of principles of human and biophysical geography to gain new understanding of northern quarter of planet, placed within broader global context. P/NP or letter grading.


125. Health and Global Environment. (4) Lecture, three hours; reading period, one hour. Impact of environment and lifestyle on individual health examined from geographical perspective, with examples from both developed and developing countries. P/NP or letter grading.


M127. Soils and Environment. (4) (Same as Ecology and Evolutionary Biology M127 and Environment M127.) Lecture, three hours; discussion, one hour; field trips. General treatment of soils and environmental implications: soil development, morphology, and weathering; geographic variability of chemical, hydrologic, and biological properties; water use, erosion, and pollution; management of soils as related to plant growth and distribution. P/NP or letter grading.


129. Seminar: Environmental Studies. (4) Seminar, three hours; reading period, two hours. Preparation: one course each from natural and human systems core, three environmental studies cluster courses. Limited to seniors. Qualitative/quantitative analysis of problems associated with rational protection and use of selected environmental systems (urban, rural, forest, coastal, water, soil, or others). P/NP or letter grading.

130. Geographical Discovery and Exploration. (4) Lecture, three hours; reading period, one hour. Requisities: courses 1, 3. Designed for juniors/seniors. Survey of history of exploration from earliest times to modern, with emphasis on period from Marco Polo to present. P/NP or letter grading.

M131. Environmental Change. (4) (Same as Environmental M130.) Lecture, three hours; reading period, one hour. Designed for juniors/seniors. Examination of natural forces producing environmental changes over past two million years. How present landscape reflects past conditions. Effects of environmental change on people. Increasing importance of human activity in environmental modification. Focus on impact of natural and anthropogenic changes on forests, P/NP or letter grading.

132. Food and Environment. (4) Lecture, three hours. Designed for juniors/seniors. Thematic orientation to food systems and their role in environmental and cultural transformations. P/NP or letter grading.

133. Cultural Geography of Modern World. (4) Lecture, three hours; reading period, one hour. Designed for juniors/seniors and graduate students. Historical and structural approach to cultural geography of modern world system, with emphasis on structure and functioning of its core, semi-periphery, and periphery. P/NP or letter grading.

134. Space, Place, and Nature in Western Thought. (4) Lecture, three hours; discussion, one hour. Designed for juniors/seniors. Historical development of basic ideas of geography—space, place, and nature—in Western thought. Relation of these ideas and conceptions of science, knowledge, and inquiry. P/NP or letter grading.


M137. Historical Geography of American Environment. (4) (Same as Environment M137.) Lecture, three hours. Designed for juniors/seniors. Study of systematic changes of natural landscapes in U.S. during historical time, with emphasis on interplay between and among natural factors of climate, soils, vegetation, and landforms, and human factors of settlement patterns, activity technology, and cultural traits. P/NP or letter grading.

138. Place, Identity, and Networked World. (4) Lecture, three hours; reading period, one hour. Communication technologies, such as personal computers.
184. California. (4) Lecture, three hours; reading period, one hour. Limited to juniors/seniors. Systematic and comparative analysis of landforms, including physical, cultural, and economic aspects and detailed studies of various regions. P/N or letter grading.

185. South and Southeast Asia. (4) Lecture, three hours; reading period, one hour. Designed for juniors/seniors. Regional synthesis with varying emphasis on people of South or Southeast Asia in their physical, biotic, and cultural environment and its dynamic transformations. P/N or letter grading.

186. Contemporary China. (4) Lecture, three hours; reading period, one hour. Designed for juniors/se- niors. Systematic geographic analysis of elements of landscape, resources, population, and socioeconomic, environmental, and political problems in China. Dynamics that have led to China’s major role in East Asia and international scene, with special attention to China-Japan and Sino-American relations and their geographic bases. P/N or letter grading.

187. Middle East. (4) Lecture, three hours; reading period, one hour. Designed for juniors/seniors. Analysis of economic, social, and political geography of area extending from Iran to Morocco and from Turkey to Sudan. Emphasis on geographical themes and historical development of Middle America and contempor- ary economic and cultural geography of Mex- ico and countries of Central America and West In- dies. P/N or letter grading.

191. Variable Topics Research Seminars: Geogra- phy. (4) Seminar, three hours. Research seminars on selected topics in geography. Some sections may re- quire prior coursework. Consult Schedule of Classes for topics and instructors. May be repeated for credit and may be applied as elective units toward departmental majors and minors. P/N or letter grading.

194. Research Group Seminars: Geography. (2) Seminar, two hours; reading period, two hours. Designed for undergraduate students who are part of research group. Discussion of research methods and current literature in field of research of fac- ulty members or students. May meet concurrently with graduate research seminar. May be repeated for credit with topic change. P/N grading.

C194A. Research Group Seminars: Issues in Bio- physical Geography. (1) Seminar, one hour. De- signed for undergraduate group meeting of gen- eral topics and scope of biophysical modeling of land surface processes, including ideal canopy model, radiation, heat and CO2 fluxes transfer, and satellite data appli- cation. Laboratory sessions included. S/U or letter grading.

195. Community or Corporate Internships in Geog- raphy. (4) Seminar, three hours; laboratory, three hours. Not open for credit to students with credit for course M127. Examination of field procedures and concepts used in ob- servation, measurement, analysis, and interpretation of physical phenomena pertinent to natural and built environment. Topics vary from year to year and may include soil and ecological studies, and field methods to geographic information science. May be repeated for credit with topic change. P/N or letter grading.

198. Spain. (4) Lecture, three hours; reading period, one hour. Designed for juniors/seniors. Study of geographic factors, physical, and cultural, that are basic to understanding historical development of Middle America and contemporary economic and cultural geography of Spanish-speaking countries. P/N or letter grading.

198A. Spanish South America. (4) Lecture, three hours; reading period, one hour. Designed for juniors/seniors. Study of geographic factors, physical, and cultural, that are basic to understanding historical development of Portuguese South America and contemporary economic and cultural geography of Brazil. P/N or letter grading.

198B. Brazil. (4) Lecture, three hours; reading period, one hour. Designed for juniors/seniors. Study of geographic factors, physical, and cultural, that are basic to understanding historical development of Portuguese South America and contemporary economic and cultural geography of Brazil. P/N or letter grading.

200. History and Paradigms of Geomorphology. (4) Lecture, two hours; discussion, one hour; reading period, eight hours. Focus on two courses from 101, 103, 105, M107. Requisite: course 100. Analysis of geomorphic theories since scientific revolution, with emphasis on catastrophism, uniformitarianism, glacial theories, isostasy and eustasy, evolution and cyclicity, thermodynamics and mechanistic quantifica- tion, and current paradigms. View of each theme in its contemporary milieu. S/U or letter grading.

201. Coastal Geomorphology Seminar. (4) Semi- nar, three hours; reading period, five hours; fieldwork. Requisites: courses 100 and 105. Discussion of selected topics pertaining to geomorphic processes and re- sponses observable in coastal zone. May be repeated for credit. S/U or letter grading.

202. Fluvial Geomorphology Seminar. (4) Seminar, three hours; reading period, five hours; fieldwork. Requisites: courses 100 and 105, or Civil Engineering 150. Discussion of selected topics pertaining to ac- tion of running water in shaping physical landscape. May be repeated for credit. S/U or letter grading.

203. Glacial Geomorphology Seminar. (4) Seminar, 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. S/U or letter grading.

204A-204B-204C. Advanced Climatology. (4) Lec- ture, three hours; laboratory, one hour. Preparation: first-year calculus and algebra, Fortran IV. Requisite: course 104. Courses must be taken in se- quence. Introduction to tools and concepts of envi- ronmental physics of relevance to natural and man- made landscapes. Such basic intellectual, mathe- matical, and computer programming tools are of special concern to physical geographers, ecologists, and archi- tects. S/U or letter grading.

205. Seminar: Climatology. (4) Seminar, three hours; 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 appli- cation. Laboratory sessions included. S/U or letter grading.

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; 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 appli- cation. Laboratory sessions included. S/U or letter grading.

207. Regional Climate and Terrestrial Surface Pro- cesses. (4) Seminar, three hours. Designed for gradu- ate students. Physical concepts and principles of land-surface/ atmosphere interactions. Exploration of topics in terms of regional and global perspective and implications. Human activities cause changes in land cover, which in turn affect climate. 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. Inten- sive review and analysis of physical and cultural factors influencing plant distributions. S/U or letter grading.

212. Advanced Biogeography: Animals. (4) Lec- ture, two hours; discussion, one hour; reading period, one hour. Requisite: course 112. Intensive review and analysis of biophysical and cultural factors influencing animal distributions. S/U or letter grading.

215. Seminar: Biogeography. (4) Seminar, 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. S/U or letter grading.

215. Quaternary Studies: Physical Aspects. (4) Dis- cussion, three hours; reading period, two hours; field- work, three hours. Preparation: at least one course from 200 through 205 or one appropriate graduate course in atmospheric, oceanic sciences or Earth and space sciences. Analysis of changing physical environment of Quaternary period. May be repeated for credit. S/U or letter grading.
217. Quaternary Studies: Ecological Aspects. (4) Discussion, three hours; reading period, two hours. Requisite: course 248 or 270A, or 240B, or 250A, or 250B, or 208B or 212 or one or more foundational courses in topography, geology, and environmental science. Letter grading.

218. Advanced Medical Geography. (4) Lecture, two hours; discussion, one hour; reading period, one hour. Requisite: course 118. In-depth study of selected topics in medical geography and intensive review of recent research. S/U or letter grading.

223. Seminar: Humid Tropics. (4) Seminar, three hours; reading period, two hours. Designed for graduate students. Topics related to distribution, colonization, and use of tropical rainforests. May be repeated for credit. S/U or letter grading.

227. Land Degradation. (4) Seminar, three hours. Discussion on impact of human activities and institutions on terrestrial ecosystems and goods and services they provide. Topics vary from year to year. May be repeated for credit with topic change. S/U or letter grading.

228. Human Security and Environmental Change. (4) Seminar, three hours. Discussion of impact of environmental change on water, food, and physical security of human populations and societies' adaptations to environmental change. Topics vary from year to year. S/U or letter grading.

M229A. Development Theory. (4) Same as Urban Planning M234A.) Lecture, three hours. Review of basic literature and research on development. Introduction to conceptual issues in development, with emphasis on the political economy of development. May be repeated for credit. S/U or letter grading.

M229B. Ecological Issues in Planning. (4) Same as Urban Planning M234B.) Lecture, three hours. Recommended preparation: Urban Planning M265. Science and politics of modern environmentalism and planning in light of transformations inherent in global change, including how to address these questions in ways that benefit biodiversity and biodiversity. American environmentalism has become dominant model for many conservation practices. Informed by American environmentalism has become dominant model for many conservation practices. May be repeated for credit. S/U or letter grading.

M229C. Resource-Based Development. (4) Formerly numbered M229F.) Same as Urban Planning M234C.) Lecture, three hours. Recommended preparation: course M229A. Some major issues associated with economic development and consumption of 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. Termination and Theory in Political Economy: Decolonization in Theory and Practice. (4) Seminar, three hours; discussion, three hours. Designated for graduate students. Deconstruction of off-used terms in intellectual discourse with goal of unpacking assumptions more explicit, analysis more concise, and use of theory to inform practice (and vice versa) more successful. Attempt to reconstruct more concise and useful terminology to inform theoretical in- quires and research practices. 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 global landscape ecology and its implications for environmental geography. S/U or letter grading.

233. Seminar: Cultural Geography. (4) Seminar, three hours; reading period, two hours. Discussions on specific topics in cultural geography. Content may vary from year to year. May be repeated for credit. S/U or letter grading.


235. Seminar: Social Geography. (4) Seminar, three hours; reading period, one hour. Process of doing social/cultural geography entails conceptualizing, adapting, and reformulating social and critical theories of space, subject, and power. Examination of this process by considering theoretical themes that shape concepts and methods of research. Topics to reflect critical discussions of recent research in social/cultural geography, particularly around topics of gender, race, sexuality, subjects and spatiality and agend- a, and social difference and identity. S/U or letter grading.

M236A. Theories of Regional Economic Development I. (4) Same as Policy M240 and Urban Planning M236A.) Lecture, three hours; discussion, one hour. Introduction to theories of location of economic activity, trade, and other forms of contact between regions, process of regional growth and de- cline, reasons for different levels of economic develop- ment, regional economy, and social structures of less and more developed regions. Letter grading.

M236B. Globalization and Regional Development. (4) Same as Urban Planning M236B.) Lecture, three hours. Requisite: course M236A. Application of theories of regional economic development, location, and trade learned in course M236A to contemporary pro- cess known as globalisation. Examination of nature and effects of globalization on development, employ- ment, and social structure, along with implications for policy. Letter grading.

237. Seminar: Historical Geography. (4) Seminar, three hours; reading period, two hours. Theory and practice of historical geography in North America and Europe. May be repeated for credit. S/U or letter grading.

240. Advanced Political Geography: Geopolitics. (4) Lecture, two hours; discussion, one hour; reading period, one hour. Intensive study of theories 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 of Italy. (4) Formerly numbered 241.) Same as Italian M241.) Seminar, three hours; reading period, two hours. Themes in political geography with particular empha- sis on Italy. May be repeated for credit. S/U or letter grading.


243. International Migration. (4) Same as Sociology M236B.) Lecture, three hours. Further exploration of key conceptual categories in study of intercultural migra- tion, with emphasis on exploring both theo- retical debates of field and empirical data and case studies on those debates hinge, to encourage students to undertake research in field. S/U or letter grading.

248. Location and Space Economy. (4) Lecture, two hours; discussion, one hour; reading period, one hour. Methodologies of locational analysis as applied to problems of regional growth and development. S/U or letter grading.

249. Seminar: Economic Geography. (4) Seminar, three hours; reading period, two hours. Requisite: course 248. Related research projects growing out of course 248. May be repeated for credit. S/U or letter grading.

250. Urban Systems. (4) Lecture, two hours; discus- sion, 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 size distribution of cities. S/U or letter grading.

251. Seminar: Urban Geography. (4) Seminar, three hours; reading period, two hours. Requisite: course 250. Related research projects growing out of course 250. May be repeated for credit. S/U or letter grading.

Procedures

260. Advanced Field and Laboratory Methods in Biophysical Geography. (4) Laboratory, five hours; fieldwork, five hours. Examination of advanced field and laboratory procedures used in contemporary biological geography research. Related research projects growing out of credit with instructor change. S/U or letter grading.


265. Environmentalisms. (4) Same as Urban Planning M265.) Lecture, three hours; discussion, one hour. Review of environmental theories and their prac- tices in dynamic U.S. and international contexts. Is- sues of climate change, scenario planning, and matrix ecology and its implications in urban and rural settings. Exploration of problematic of increasing inter- nationalization (or international implications) of envi- ronmental practices as part of both green and black economies. What does integrated environmental planning look like in this century? Letter grading.

266. Advanced Projects in Geographic Information Systems (GIS)/Remote Sensing. (4) Lecture, one hour; laboratory, three hours. Recommended requi- site: courses 169 or 170 or Earth and Space Sciences M215.) Lecture, three hours; discussion, one hour. Familiarity with GIS or image processing pack- age expected. Individualized research projects con- ducted on UNIX platforms within structured course environment. All aspects of research project in- cluding, data acquisition, ingestion, and analysis; interpretation of results and presentation in publi- cation-style format. Letter grading.


Regions

282. South America. (4) Seminar, three hours; read- ing period, two hours. Introduction to main issues in geography of South America, with focus mainly on
cultural/historical geographical perspectives on national period; themes and periods can be adapted to individual interests. S/U or letter grading.

283. Europe. (4) Seminar; two hours; discussion, two hours. Requisite: course 171. Use of linear models, discriminant functions, and factor analysis to analyze problems in geography. S/U or letter grading.

286. Geography of Contemporary China. (4) Seminar, three hours; reading period, two hours. Designed for graduate students. May be repeated for credit. S/U or letter grading.

292. Advanced Regional Geography: Selected Regions. (4) Lecture, three hours; discussion, one hour. Requisite: Upper-division Geography. Lecture series devoted to one specific geographic region at discretion of instructor. May be repeated for credit. S/U or letter grading.

Seminars

295. Seminar: Geographic Thought. (4) Seminar; three hours; reading period, two hours. Designed for graduate students. Discussion and study of concepts significant to modern geography. S/U or letter grading.

296A. Research Group Seminars: Issues in Biological Geography. (1) Seminar; one hour. Biweekly seminar to discuss current research in biological geography. Topics vary from year to year. May be repeated for credit. Concurrently scheduled with course C194A. S/U grading.

296B. Cultural Geography Methods Workshop. (1) Seminar, two hours. Biweekly forum for presentation and discussion of interpretive methods. Topics vary from year to year. May be repeated for credit. S/U grading.

296C. Political Geography Working Group. (1) Seminar, two hours. Limited to graduate students. Biweekly forum for analysis of current geopolitics, with emphasis on geographic impacts of recent global events. S/U grading.

296D. Agriculture and Food Studies Colloquium. (1) Seminar, one hour. Current scholarly debates surrounding topics in agriculture and food. Interdisciplinary discussion, with focus on research that explores confluence of production and consumption studies vis-à-vis agriculture and food. Group discussion of recently published work, works-in-progress by participants, and distinguished guest speakers. S/U grading.

296E. Research Group Seminars: Issues in Human Geography. (1) Seminar, one hour. Biweekly seminar to discuss current research in human geography. Topics vary from year to year. May be repeated for credit. S/U grading.

Core Courses

297A. History and Structure 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 horizons 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 168, Statistics 12. Development of broad base of knowledge and set of skills that foster conduct of high-quality geographic data analysis. S/U or letter grading.

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) 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.

Special Studies

375. Teaching Apprentice Practicum. (1 to 4) Seminar, to be arranged. Preparation: apprentice personnel employment as teaching assistant, associate, or fellow. Teaching apprenticeship under active guidance and supervision of regular faculty member responsible for curriculum and instruction at UCLA. May be repeated for credit. S/U grading.

495. Teaching College Geography. (2) Seminar; one hour; laboratory; three hours. Classroom practice in teaching, with individual and group instruction on related educational materials, methods, and evaluation. May be repeated for credit. S/U grading.

596. Directed Individual Study or Research. (2 to 8) Tutorial, to be arranged. May be repeated for credit. S/U grading.

597. Preparation for Ph.D. Qualifying Examinations. (2 to 8) Tutorial, to be arranged. Independent study. May be repeated for credit. S/U grading.


GERMANIC LANGUAGES

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Hans Wagener, Ph.D.

Associate Professor

Christopher M. Stevens, Ph.D.

Lecturer

Magdalena Tarnawska Senel, Ph.D.

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

The German major is a designated capstone major. During their senior year, students participate in a seminar where, under the guidance of a faculty member, they reflect individually and collaboratively on prior coursework for the major, review their work in those courses, and draw out common themes. Through this process students are expected to draw from their prior coursework to identify a key idea or theme that interests them, demonstrate skills at analyzing and synthesizing knowledge, show their capacity to work well with peers, and present effectively what they have learned in a final paper or project.

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.

Capstone Major
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 90 or more units must complete the following introductory courses prior to admission to UCLA: two years of German.

Refer to the UCLA Transfer Admission Guide at http://www.admissions.ucla.edu/prospect/admtr.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), 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, and one capstone seminar (course 191C) under the supervision of a faculty member. 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).

A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor.

Each minor course must be taken for a letter grade, and students must have an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

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.

A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor.

Each minor course must be taken for a letter grade, and students must have an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

Graduate Study
Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website, http://grad.ucla.edu/gasaa/librarian/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 Scandinavian Section).

Afrikaans
Lower Division Course
103A. Introduction to Afrikaans. (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.

103B. Elementary Afrikaans. (4-4) Lecture, four hours; language laboratory. Course 103B. Grammatical exercises, conversation, reading and analysis of simple texts, P/NP or letter grading.

104A. Intermediate Afrikaans. (6-6) Lecture, four hours; discussion, one hour; laboratory, two hours. Covers material in courses 103A, 103B, 103C in two terms rather than three. Letter grading.

113. Modern Dutch and Flemish Literature. In Translation. (4) Lecture, three hours. Readings and analysis of works by selected authors of Netherlands and northern (Flemish) Belgium such as Boon, Claus, Couperus, Herrmans, Mulisch, Mutatul, and Reve and selected poets such as Campert, Gezelle, Gorter, Kloo, Lucebert, Nijhoff, Van Ostaijen, and Worman. Letter grading.


131. Introduction to Modern Dutch Literature. (4) Lecture, three hours. Course 103B or 120. Selected works of literature of Netherlands and northern (Flemish) Belgium from mid-1850s to present, including novels by such writers as Multatuli, Couperus, Herrmans, Mulisch, and Reve and poetry by such groups as symbolist Beweging van Tachtig and post-War Beweging van Vrijtijg. P/NP or letter grading.

Dutch
Lower Division Course
10. Contemporary Dutch Society and Culture: Beyond Rembrandt, Cheese, and Wooden Shoes. (5) Lecture, three hours. Lectures and readings in English. Country known as Holland, or more correctly, The Netherlands (in Dutch: Nederland) has played crucial role in both American history and American current events. It was first country to set up official diplomatic relations with U.S. (in 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.

103C. Intermediate Dutch. (4) Lecture, four hours; language laboratory. Course: 103B. Grammatical exercises, conversation, reading and analysis of simple texts, 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.

119-120. Directed Research or Senior Project in Afrikaans. (4) Lecture, three hours. Limited to juniors/seniors. Supervised individual research or investigation under guidance of faculty mentor. Culminating paper or project required. May be repeated for credit. Individual contract required. P/NP or letter grading.

Graduate Courses
596. Directed Individual Study or Research in Afrikaans. (4) Tutorial, to be arranged with faculty member who directs study or research (course section to be identified by two-letter code using initials of sponsoring instructor — see department for I.D. number). May be repeated once. S/U grading.

597. Preparation for Ph.D. Qualifying Examinations. (4) Tutorial, to be arranged with instructor (see department for I.D. number). S/U grading.
German

Lower Division Courses

1. Elementary German. (4) Lecture, five hours; laboratory, one hour. Enforced requisite: course 1G. Preparation for Graduation Division foreign language reading requirement. May not be applied toward degree requirements. S/U grading.

2. Elementary German. (4) Lecture, five hours; laboratory, one hour. Enforced requisite: course 1G. Preparation for Graduation 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 2G. 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 4. P/NP or letter grading.

6. Intermediate German. (4) Lecture, four hours; laboratory, one hour. Enforced requisite: course 5. P/NP or letter grading.

7. Elementary German Intensive. (12) Lecture, fifteen hours; laboratory, five hours. Intensive basic course in German equivalent to courses 1, 2, and 3. P/NP or letter grading.


12. German Conversation. (4) Discussion, 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.

50A-50B. Great Works of German Literature in Translation. (4-5) Lecture. May not be applied toward completion of major in German. P/NP or letter grading.

50A. Medieval Period through Classicism. (4) Lecture, three hours. Study and analysis of selected masterworks in English translation, including works from earliest period, such as heroic and courtly epic, to authors such as Grimmelshausen, Lessing, Schiller, and Goethe. P/NP or letter grading.

50B. Romanticism to Present. (5) Lecture, three hours; discussion, one hour. Study and analysis of selected masterworks in English translation, including authors such as E.T.A. Hoffmann, Heine, Fontane, Rilke, Kafka, Brecht, Thomas Mann, Heidegger, Grass, Böll, and Christa Wolf. P/NP or letter grading.

55. City as Text: German Exile Culture in Los Angeles. (4) Lecture. Three hours. Not open for credit to students with credit for former course 55W. 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.

56. Figures Who Changed World. (5) Lecture, three hours; discussion, one hour. Introduction to strains of German philosophy and political thought that restructured internationally. Use of version of “great man” model of history to move beyond such models in its understanding of how, exactly, intellectual currents actually functioned in German history.

100. German History and Culture before 1500. (4) Lecture, three hours; discussion, one hour. Taught in English. Study 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) 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) Lecture, three hours; discussion, one hour. Taught in English. Analysis of relationship 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) Lecture, two hours; discussion, one hour. Taught in English. Survey of German film between 1919 and 1945. Analysis of technological and stylistic development of film from silent Expressionist films to Nazi propaganda and entertainment films. Film discussions enhanced by interactive media. Letter grading.

104. German Film in Cultural Context, 1945 to Present. (4) Lecture, two hours; discussion, one hour. Taught in English. Survey of German film since 1945 in its thematic and stylistic diversity. How did German filmmakers grapple with aftermath of 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.

M105. Tristian, Isolde, and History of Heterosexuality. (4) (Same as Gender Studies M119.) Lecture, three hours. Taught in English. German, French, and English versions of Tristan and Isolde from Middle Ages to 20th century. Particular attention to relationship 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’s 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.

M107. Love and Sex in German Literary Tradition. (4) (Same as Gender Studies M108.) 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 Critics of Western Culture. (4) Lecture, two hours; discussion, one hour. Taught in English. Readings that focus on Nietzsche’s critique of Christianity, master/slave dynamics, and reciprocal relation between poetry and philosophy. German majors required to complete all readings in German. Letter grading.

109. Jewish Question and German Thought. (4) 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) 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 Modernist Authors in English. (4) Lecture, three hours. Taught in English. Survey of various folklore genres in culture, three hours. Taught in English. Cultural and historical frameworks such as Romanticism, Fascism, and/or divided/undivided Germanies. Letter grading.

112. Feminist Issues in German Literature and Culture. (4) 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/undivided Germanies). Letter grading.

113. German Folklore. (4) Lecture, three hours. Taught in English. Survey of various folklore genres in cultural context, including legends, proverbs, and cultural contrasts. Texts include Krakauer (Hauptmann), excerpts from Buddenbrooks (Mann), and Siddharta (Hesse). Viewing of films based on Lost Honor of Katharina Blum and Tin Drum. Letter grading.

114. Fairy Tales and Fantastic. (5) 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. (4) 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, as 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. (4) 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, as 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 theorists. Letter grading.

117. German Exile Culture in Los Angeles. (4) Lecture, three hours. Taught in English. Cultural and historical exploration of exile as site of creative activity for German authors during the rise of Nazism and the World War II. Generals questions of cultural migration and cultural transfer to be thematized. P/NP or letter grading.

118SL. Between Memory and History: Interviewing Holocaust Survivors. (4) Seminar, two hours; fieldwork, two hours. Strongly recommended requisites: prior European and Holocaust courses. Examination of historical value of eyewitness testimony of Holocaust survivors and unique service opportunities that bring students together with survivors. Question of testimony approached from number of perspectives, including legal, historical, and ethical, to examine vexed relationship between history and memory. Determination of survivor testimony through classic membranes in field, such as Primo Levi’s The Drowned and the Saved and Ruth Kluger’s Still Alive. Through collaboration with Family Services, 1939 Fund, and Los Angeles Museum of Holocaust, students meet and work with Holocaust survivors and undertake collaborative research projects and oral histories. Students will also curate and lead interactive tours through Museum of Holocaust. Letter grading.

140. Language and Linguistics. (4) Lecture, three hours. Taught in English with German proficiency required. Theories and methods of linguistics, with emphasis on structure of modern standard German, its phonology, morphology, syntax, semantics, and pragmatics. Other topics such as the social variation of German (i.e., its historical development, dialectology, and sociolinguistic dimensions). Letter grading.

141. Current Topics in Germanic Linguistics. (4) Lecture, three hours. Taught in English with German proficiency required. Analysis of one topic in field of Germanic linguistics, such as phonetics and phonology, morphology and syntax, semantics and pragmatics, social and spatial variation of German (i.e., sociolinguistics and dialectology of German), or history of German. May be repeated for credit. Letter grading.

142. Linguistic Theory and Grammatical Description. (4) Lecture, three hours. Prerequisite: 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, discourse grammar, and cognitive linguistics. Discussion of formal linguistic approaches. Concurrently scheduled with course C238. Letter grading.

150. German Play Production Act I. (5) Lecture, four hours. Taught in German. Production of four plays (readings vary). Emphasis on drama and device as 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) Lecture, four hours. Prerequisites: courses 3 (enforced). Taught in German. Staging of German plays. 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) Lecture, three hours. Prerequisite: course 6. Taught in German. Structured around themes as they emerge in contemporary German texts ranging from news magazine articles to literature, with emphasis on speaking and writing proficiency. Presentation software featured. P/NP or letter grading.

153. Conversation and Composition on Contemporary German Culture and Society II. (4) Lecture, three hours. Prerequisite: course 6. Taught in German. Structured around themes as they emerge in contemporary German texts ranging from news magazine articles to literature, with emphasis on speaking and writing proficiency. Presentation software featured. P/NP or letter grading.

154. Business German. (4) Lecture, three hours. Prerequisite: course 6. Taught in German. Specialized language course that teaches German business administration, practices, and correspondence, with attention to cultural nuances. Ongoing developments in European Union analyzed via newspaper articles and Internet. P/NP or letter grading.

155. Advanced German Language through Cultural History and Current Affairs. (4) Lecture, three hours. Prerequisites: courses 152, 153. Taught in German. Advanced German language course that juxtaposes cultural history with current affairs to teach complex speaking and writing skills of interpretation, analysis, and criticism. Readings may include selections from Luther, Heine, Freud, and current authors. Students also research and curate series of interactive or interactive articles. P/NP or letter grading.

156. Advanced Practical Translation. (5) Lecture, three hours. Prerequisite: course 155 with grade of B or better. Taught in German. German to English translation of literarisch-episodic texts. Work in technique of translation. Letter grading.

157. Contemporary German Cinema: Advanced Conversation and Composition. (4) Lecture, three hours. Taught in German. Development of advanced speaking skills and thorough grounding in essay writing in German by considering issues of style, structure, grammar, and vocabulary. Introduction to contemporary German cinema. Examination of major works from Middle Ages to Baroque. Letter grading.

158. Introduction to Study of Literature. (4) Lecture, three hours. Taught in German. Introduction to most important terms and resources of literary analysis to help students develop and improve skills in close and critical reading of literary texts, develop basic research techniques, acquire familiarity with basics of literary and cultural analysis, and find pleasure in pursuit of literary and cultural study. Letter grading.

160. Introduction to German Poetry. (4) Lecture, three hours. Prerequisite: course 152 or 153. Taught in German. Close reading of representative examples of German lyric poetry from a variety of literary periods, including systematic consideration of poetic conventions and forms, diction, imagery, symbolism, and metrics. Letter grading.

161. Introduction to German Drama. (4) Lecture, three hours. Prerequisite: 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 theories. Texts selected from both contemporary and earlier periods. Letter grading.

162. Introduction to German Narrative Prose. (4) Lecture, three hours. Prerequisite: course 152 or 153. Taught in German. Analysis of narrative prose genres (e.g., short story, novella, fairy tales, etc.), including systematic review of narrative forms, techniques, and styles. Texts selected from both contemporary and earlier periods. Letter grading.

163. Project of Enlightenment. (4) Lecture, three hours. Prerequisite: course 152 or 153. Taught in German. Examination of the Enlightenment in German literature, social history, and culture. Works by Goethe, Lessing, Schiller, Kant, Mozart, and others. Letter grading.

164. Introduction to 19th-Century Studies. (4) Lecture, three hours. Prerequisite: course 152 or 153. Taught in German. Introduction to the 19th century. Emphasis on selected modern works written between 1890 and 1945, including texts by authors such as Thomas Mann, Kafka, Rilke, Brecht, and others. Letter grading.

165. Introduction to Modern Literature. (4) Lecture, three hours. Prerequisite: course 152 or 153. Taught in German. Introduction to Modernism. Emphasis on selected modern works written between 1890 and 1945, including texts by authors such as Thomas Mann, Kafka, Brecht, and others. Letter grading.

166. Introduction to Contemporary Literature. (4) Lecture, three hours. Taught in German. Analysis and discussion of German, Austrian, Swiss, and ex-GDR literatures from 1945 to present. Examination of writers such as Heinrich Böll, Günther Grass, Friedrich Dürrenmatt, Elfriede Jelinek, and Christa Wolf with view to their specific political and cultural context. Letter grading.

169. Studies in German Literature before 1750. (4) Lecture, three hours. Taught in German. Enforced requisite: course 152 or 153. Taught in German. Readings and analysis of major works from Middle Ages to Baroque. Letter grading.


173. Advanced Study of Modern Literature. (4) Lecture, three hours. Enforced requisite: course 152 or 153. Taught in German. Literature after 1945 in German-speaking countries, including issues such as national identity, gender relations, and commercialization of culture. Letter grading.

174. Advanced Study of Contemporary Literature and Culture. (4) Lecture, three hours. Enforced requisite: course 152 or 153. Taught in German. Literature after 1945 in German-speaking countries, including issues such as national identity, gender relations, and commercialization of culture. Letter grading.

175. Intercultural Germany: Literature, Politics, Migration, and Culture. (4) Lecture, three hours. Taught in German. Most readings in German; some theoretical readings in English. Exploration of issues surrounding immigration and intercultural identity in Germany since the beginning of the 20th century. 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, gender, and age. 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. Ex- amination of hip-hop minority music and culture as voices in political debates. Exploration of contemporary controversies around Islam in Germany. Reading of several theoretical pieces that examine relationships between immigration, globalization, culture, and identity. P/NP or letter grading.

187. Undergraduate Seminar. (4) Seminar, three hours. Required of all German majors who are candidates for general secondary instructional credential. Content varies by instructor and may include advanced work in folklore, film, and German studies. Letter grading.

191A. 19th-Century Topics Research Seminars: German. (4) Seminar, three hours. Required course 6. Taught in German. Research seminars on topics to be announced each term. Topics include major writers, genres, or cultural movements and theoretical practices. May be repeated for credit with consent of major ad- viser. P/NP or letter grading.

191C. Capstone Seminar. (2) Seminar, three hours. Requisites: courses 140 or 141, 152, 153, 158, and four upper division courses required for major. Limit- ed to senior German majors. Collaborative discussion of and reflection on courses already taken for major, drawing out and synthesizing larger themes and cul- minating in paper or other final project. Must be taken in conjunction with one course numbered 140 or high- er. Letter grading.

197. Individual Studies in German. (2 to 4) Tutorial, three hours. Limited to juniors/seniors. Individual in- tensive 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 credit. Individual contract required. P/NP or letter grading.

199. Directed Research or Senior Project in German. (4) Tutorial, three hours. Limited to juniors/se- niors. Supervised individual research or investigation under guidance of faculty mentor. Culling paper or project may be required for credit. Indi- vidual contract required. P/NP or letter grading.

Graduate Courses

201A. Bibliography, Research Methods, and Scholarly Writing. (4) Lecture, three hours. Introduc- tion to current research and analysis of literary and philological materials, with empha- sis on bibliographies and such tools of research as reference works, series publications, journals, ar- chives, literary histories, and special attention to on- line resources. Analysis of sources, compilation and presentation of bibliogra- phies, and writing of research papers. Letter grading.

201C. Theories of Literary Interpretation. (4) Lecture, three hours. Advanced analysis and discussion of major theoretical approaches to literary analysis, schools of thought such as hermeneutics, psychoan- alytic criticism, social historical approaches, semiotic, structuralism, and poststructuralism. Topics vary with instructor. Letter grading.

202A. Middle High German. (4) Lecture, three hours. Introduction to Middle High German language, with particular emphasis on developing facility in reading. Study of grammar, syntax, and vocabulary combined with introduction to poetic forms and cultural context. Letter grading.

202B. Readings in Middle High German Literature. (4) Lecture, three hours. Introduction to medieval Ger- man literature and literary history and to use of con- temporary theory in study of medieval texts. Contin- ued practice in reading Middle High German, al- though most texts to be read in modern translation. Letter grading.

204. Early Modern German Literature. (4) Lecture, three hours. Selected readings from 1500 to 1700, with introduction to development of German as modern literary language and to literary genres and cultural significance of the age. Letter grading.

205. Advanced Modern German Literature. (4) Lecture, three hours. Study of grammar, syntax, and vocabulary combined with an introduction to poetic forms and cultural context. Letter grading.


207. Weimar Classicism. (4) Lecture, three hours. Reading and interpretation of major works of German Classicism. May include problems in reception of classicism by later authors and cultural theorists. Let- ter grading.

208. 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.

208A. 19th-Century Lyrics. (4) Lecture, three hours. Discussion and analysis of poetry from classicism/Romantic period through symbolism. Discussion of changes in genre, form, content, and social implica- tion, Letter grading.

209B. 19th-Century Drama. (4) Lecture, three hours. Analysis of selected plays and their reception from Kleist to Wagner. Discussion of historical drama, so- ciopolitical drama, Volksbühne, and other forms. Let- ter grading.


210A. Naturalism, Symbolism, and Expressionism. (4) Lecture, three hours. Analysis of selected works (poetry, drama, prose) of early modernism from Hauptmann to Kafka. Discussion of sociological trends 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 conscious- ness, and culture conflict. Analysis of works of such as World War II. Examination of issues of identity crises, nationalism, and divided Germany, gender expectations, and social-political attitudes. 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 of identity crises, nationalism and divided Germany, gender expectations, and social-political attitudes. Letter grading.

212. Contemporary Literature and Culture. (4) Lecture, three hours. Analysis of current cultural issues and their relation to literary production and interpreta- tion. Topics may include areas such as feminism, postcolonialism, postmodernism, and contemporary multiculturalism.

213. Topics in Literature and Film. (4) Lecture, three hours. Focus on two different modes of cultural representation, examination of topics in German liter- ature and film from Weimar Republic to present. Study of literary theory, feminist film theory, and inter-relationships between film, literature, and social histo- ry. Letter grading.


231. Gothic. (4) Discussion, three hours. Systematic study of phonology and grammar of Gothic language, with readings in Wulff’s translation of Bible and intro- duction to history of Goths and their place in develop- ment of modern Europe. S/U or letter grading.

232. Old High German. (4) Discussion, three hours. Introduction to earliest phases of modern German language, with extensive readings in major documents of that period (750 to 1050). Emphasis on grammatical inter- pretation of these documents and identification of dia- lects used in their composition. S/U or letter grading.


238. Linguistic Theory and Grammatical Description. (4) 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, func- tional linguistics, discourse grammar, and cognitive linguistics. Discussion of formal linguistic approach- es. Concurrently scheduled with course C142. Gradu- ate students meet as group one additional hour each week and write research papers of greater length and depth. 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 Schiller and Schelling. Study of primary texts such as Hegel’s Phänomenologie des Geistes or as it relates to historical events such as French and American 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.


261. Seminar: Contemporary Literature. (4) Seminar, three hours. In-depth analysis of one particular issue in post-1945 German literature and culture. Letter grading.

262. Seminar: Germanic Folklore. (4) Seminar, three hours. Detailed investigation of individual aspects 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. Special focus on particular theoretical school or interpretative paradigm. Content varies with instructor. Letter grading.


265. German Philosophy. (4) Seminar, three hours. German philosophical tradition is one of most influential, difficult, and problematic Western world has known. Beginning with Kant’s Critique of Pure Reason and continuing through Hegel, Marx, Nietzsche, and Heidegger to Arendt and thinkers of Frankfurt school, German philosophers have explored, more deeply and rigorously than any other Western thinkers, nature and limits (if any) of human mental activity. Results have been basic to social, political, and aesthetic theory as well as to philosophy itself. Exploration of thought of one member of that tradition by concentrating yearly on one exemplary text. Letter grading.


M299. Research Resources for European Studies. (2) (Same as French 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.

375. Teaching Apprentice Practicum. (1 to 4) Seminar, to be arranged. Preparation: apprentice personnel employment as teaching assistant, associate, or fellow. Teaching apprenticeship under active guidance and supervision of regular faculty member responsible for curriculum and instruction at UCLA. May be repeated for credit. S/U grading.

495. Approaches to Foreign Language Pedagogy. (4) Seminar, one hour; discussion, two hours. Issues include development of current theories of second-language acquisition, effects of these theories on language teaching, psycholinguistics, sociolinguistics, assessment, and use of multimedia in foreign language pedagogy, and design of syllabi for basic foreign language courses. S/U grading.

496. Teaching with Technology. (4) Seminar, one hour. Introduction for teaching assistants to technological resources available to support demonstration of how to incorporate computer-based assignments into curriculum. Discussion of pros and cons of using different types of material both inside and outside classroom, as well as how technology can be used to create teaching tools and interactive learning tools. S/U grading.

596. Directed Individual Study or Research. (4) Tutor, three hours. To be arranged with faculty member who directs study or research. Course section must be filed with department chair. S/U grading.

597. Preparation for M.A. Comprehensive Examination or Ph.D. Qualifying Examinations. (4) Tutorial, three hours. To be arranged with faculty member who directs study or research. Letter 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.


Yiddish

Lower Division Course

10. From Old World to New: Becoming Modern as Reflected in Yiddish Cinema and Literature. (5) Lecture, three hours; discussion, one hour. Use of media of Yiddish cinema (classic films and documentaries) as primary focal points to examine ways in which one heritage culture, that of Ashkenazic Jews, adapted to forces of modernity (urbanization, immigration, radical social movements, assimilation, and destructive organized anti-Semitism) from late-19th century to present. Exploration of transformational themes in depth through viewing of selected films, readings, research and weekly papers, and in-class discussions. P/NP or letter grading.

Upper Division Courses

101A. Elementary Yiddish. (4) Lecture, four hours. Introduction to grammar; instruction in listening, speaking, reading, and writing skills. P/NP or letter grading.


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 literature. 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 in Yiddish. (4) Tutorial, to be arranged with faculty member who directs study or research (course section to be identified by two- or four-credit units or letter grade under supervision of sponsoring instructor — see department for I.D. number). May be repeated once. S/U grading.

597. 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.

GERONTOLOGY

Interdisciplinary Minor

Meyer and Renee Luskin School of Public Affairs

UCLA

3375H Public Affairs Building

Box 951656

3375H Public Affairs Building

UCLA

Public Affairs

Meyer and Renee Luskin School of Public Affairs

Graduate Courses

596. Directed Individual Study or Research in Yiddish. (4) Tutorial, to be arranged with faculty member who directs study or research (course section to be identified by two- or four-credit units or letter grade under supervision of sponsoring instructor — see department for I.D. number). May be repeated once. S/U grading.

597. 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.

Scope and Objectives

The worldwide expansion of the older adult population ensures that issues regarding aging will dominate our environmental, economic, social, political, psychological, and medical
concerns and endeavors well into the twenty-first century. The undergraduate minor in Gerontology (1) provides a foundation understanding of the current state of science related to human aging, (2) enables students to assess longevity’s potential contribution and challenge to a contemporary society, and (3) provides an appreciation of opportunities to contribute, personally and professionally, to a diverse aging society.

**Undergraduate Study**

**Gerontology Minor**

To enter the Gerontology minor, students must have an overall grade-point average of 2.0 or better and a grade of B or better in Gerontology M108.

**Required Upper Division Courses (28 to 32 units):** Gerontology M108, four courses from M104C, M104D, M119O, M119X, M142SL, M150, M165, Psychology 124C, 150, and two courses from Gerontology 195, 199A, 199B.

Students who have completed General Education Clusters 80A with a grade of B or better may petition to have the course applied toward the gerontology core course requirement. Students who have completed General Education Clusters 80CW may petition to have the course applied toward one of the elective requirements.

A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor.

Each minor course must be taken for a letter grade, and students must have an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

**Gerontology**

**Upper Division Courses**

M104C. Diversity in Aging: Roles of Gender and Ethnicity. (4) (Same as Gender Studies M104C and Social Welfare M104C) Lecture, four hours. Exploration of complexity of variables related to diversity of aging population and variability in aging process. Examination of gender and ethnicity within context of both physical and social aging, in multidisciplinary perspective utilizing faculty from variety of fields to address issues of diversity. Letter grading.

M104D. Public Policy and Aging. (4) (Same as Social Welfare M104D) Lecture, four hours. Examination of theoretical models and concepts of policy process, 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 Social Welfare M104E) Lecture, four hours. Topics include theories of aging, economic factors, changing roles, social relationships, and special populations. Weekly seminars organized around key aspect of social gerontology. P/NP or letter grading.

M108. Biomedical, Social, and Policy Frontiers in Human Aging. (5) (Same as Social Welfare M108) Lecture, four hours. Limited to juniors/seniors. Course of human aging charted in ways that are based on variety of recent research frontiers. Use of conceptual frameworks to increase relevance of aging to students’ lives and enhance their critical thinking — bio-psychosocial approach. M108 presupposes that aging is inherently interdisciplinary phenomenon, and life course perspective that is distinguished by analytical framework it provides for understanding interactions between human lives and changing social structure. Focus on individuals as they age within one particular sociohistorical context. Letter grading.

M119O. Psychology of Aging. (4) (Same as Psychology M119O) Lecture, four hours. Requisite: Psychology 115. Designed for juniors/seniors. Aging refers to superempirical changes occurring throughout stages of life. Some alterations that occur represent improvement; others are detrimental. Examination of impact of aging process on mental phenomena and exploration of ways in which positive changes can be maximally utilized and impact of detrimental alterations minimized. P/NP or letter grading.

M119X. Biology and Behavioral Neuroscience of Aging. (4) (Same as Psychology M119X) Lecture, three hours. Emphasis on differences between females and males concerning physical and social changes that occur with aging and how this impacts on emotional well-being and human sexual response. P/NP or letter grading.

M142SL. Intergenerational Communication across Lifespan. (4) (Same as Social Welfare M142SL) Lecture, three hours; fieldwork, one hour. Limited to juniors/seniors. What do you say to your parents in conversation? How do you talk to your grandparents? Does your family talk well to one another as group? How do you communicate well with boss who is 30 years older than you? Individuals of all ages interact with one another, and their interactions have significance throughout their lives. Introduction to psychological, interpersonal, and societal issues related to intergenerational communication across lifespan. Letter grading.

M150. Sociology of Aging. (4) (Same as Sociology M150) Lecture, three hours; discussion, one hour. Study of sociological processes shaping definition, experience, and response to aging in contemporary society. Topics include race, class, and gender in aging over life course; interpersonal relations and social worlds of aged; caregiving relations and institutions; professions concerned with aged and aging. Letter grading.

M165. Disability Policy and Services in Contemporary America. (4) (Same as Disability Studies M165) 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 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 effective public policies and programs are responsive to people in need? How do demographics, economics, and politics continue to influence evolving public policy responses? P/NP or letter grading.

M195CE. Community or Corporate Internships in Gerontology. (Formerly numbered 195T) Tutorial, one hour; internship (approved community setting), eight hours. Requisites: course M108, or GE Clusters 80A and 80B. Limited to juniors/seniors. Internship in applications of gerontology in supervised setting in community-based or business setting coordinated by Center for Community Learning. Students meet on regular basis with internship coordinator and must submit weekly writing assignments and final paper at end of term. Eight units of 195CE (or 195E) are required for successful completion of Gerontology minor. Individual contract with supervising placement sponsor required. Information and contracts may be obtained from Gerontology Advising Office. (310) 206-9896. paul@spa.ucla.edu. Letter grading.

**199. Directed Research or Senior Project in Gerontology.** (4) Tutorial, to be arranged. Requisites: course M108, or GE Clusters 80A and 80B. Limited to juniors/seniors. Supervised individual research under guidance of gerontology faculty mentor. Submission of weekly writing assignments and research paper at end of term. Eight units of 199 (or 195CE) required for successful completion of minor. Individual contract required. Information and contracts may be obtained from Gerontology Advising Office. Letter grading.

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**GLOBAL 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
e-mail: ldpds@international.ucla.edu

http://international.ucla.edu/ldpds/globalstudies/

Michael F. Thies, Ph.D., Chair

Faculty Committee

John A. Agnew, Ph.D. (Geography, Italian)

Elizabeth M. Deloughrey, Ph.D. (English)

Saloni Mathur, Ph.D. (Art History)

David L. Rigby, Ph.D. (Geography, Statistics)

William R. Summerville, Ph.D. (History)

Michael F. Thies, Ph.D. (Political Science)

Dominic R. Thomas, Ph.D. (Comparative Literature, French and Francophone Studies)

Robert Tager, Ph.D. (Political Science)

Yunxiang Yan, Ph.D. (Anthropology)

**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 today’s pressures for transnational cultures and multiple identities, fueled by the communication of ideas and the movement of people all around the world. Governance and conflict courses focus on challenges to the nation-state from forms of governance above (regional and global forms of governance) and below (autonomy and secessionist movements) and from security threats beyond interstate warfare (ethnic conflict, terrorism, civil wars). Markets courses address
the interactions among global, regional, national, and subnational 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 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 from the three lists above. One course from the following list may be applied toward the *culture and society* category: Asian 70C, French 14, 14W, Italian 42A, 42B, Middle Eastern Studies 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 http://www.admissions.ucla.edu/prospect/admiss_tr.htm for up-to-date information regarding transfer selection for admission.

**The Major**

**Required:** Global Studies 100A, 100B, and seven elective courses, with at least two from each of the following categories and at least three in one category: (1) *culture and society* — Anthropology M154Q, Art History C180A, Chicana and Chicano Studies CM147, Communication Studies 122, Comparative Literature 100, C173, English 114, Film and Television 110C, French 142, Gender Studies M147C, M154Q, M162, Geography 133, 138, Sociology 151, 154, M162, 191F, World Arts and Cultures 102; (2) *governance and conflict* — Asian American Studies 171A, Geography 140, History 121E, 121F, 135C, Political Science 122A, 138B, 166, Public Policy CM117, Sociology 182; (3) *markets* — Anthropology 153P, Chicana and Chicano Studies 125, Economics 121, 122, Geography 148, History 131A, International Development Studies M100B, Political Science 124A, M167C, Sociology 183.

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.

**Honors Program**

To qualify for departmental honors, students must (1) have a grade-point average of 3.5 or better in upper division courses in the major, (2) have a cumulative GPA of 3.25 or better, and (3) complete Global Studies 199B with a grade of A– or better. Honors or highest honors may be granted at the discretion of the faculty sponsor and the faculty committee to students demonstrating exceptional ability on the senior thesis.

**Global Studies Minor**

The Global Studies minor offers students a multidisciplinary curriculum in the humanities and social sciences through which they can explore the complex and multifaceted interconnections that characterize the contemporary world. The minor is designed to complement and enrich studies in their major.

To enter the minor, students must (1) be in good academic standing (minimum 2.0 grade-point average) and (2) have completed Global Studies 1 and one course in two of the following three categories: (a) *culture and society* — Anthropology 9, Asian 70C, Comparative Literature 1C or 2CW, 1D or 2DW, Ethnomusicology 25, French 14, 14W, Geography 3, 6, History 2B, Italian 42A, 42B, Middle Eastern Studies 50C, Russian 90B, 90BW, Spanish 42, 44, 42. 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 http://www.admissions.ucla.edu/prospect/admiss_tr.htm for up-to-date information regarding transfer selection for admission.

**The Major**

**Required:** Global Studies 100A, 100B, and seven elective courses, with at least two from each of the following categories and at least three in one category: (1) *culture and society* — Anthropology M154Q, Art History C180A, Chicana and Chicano Studies CM147, Communication Studies 122, Comparative Literature 100, C173, English 114, Film and Television 110C, French 142, Gender Studies M147C, M154Q, M162, Geography 133, 138, Sociology 151, 154, M162, 191F, World Arts and Cultures 102; (2) *governance and conflict* — Asian American Studies 171A, Geography 140, History 121E, 121F, 135C, Political Science 122A, 138B, 166, Public Policy CM117, Sociology 182; (3) *markets* — Anthropology 153P, Chicana and Chicano Studies 125, Economics 121, 122, Geography 148, History 131A, International Development Studies M100B, Political Science 124A, M167C, Sociology 183.

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**Honors Program**

To qualify for departmental honors, students must (1) have a grade-point average of 3.5 or better in upper division courses in the major, (2) have a cumulative GPA of 3.25 or better, and (3) complete Global Studies 199B with a grade of A– or better. Honors or highest honors may be granted at the discretion of the faculty sponsor and the faculty committee to students demonstrating exceptional ability on the senior thesis.

**Global Studies Minor**

The Global Studies minor offers students a multidisciplinary curriculum in the humanities and social sciences through which they can explore the complex and multifaceted interconnections that characterize the contemporary world. The minor is designed to complement and enrich studies in their major.
A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor.

Each minor course must be taken for a letter grade, and students must have an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

Global Studies

Lower Division Courses

1. Introduction to Global Studies. (5) Lecture, three hours; discussion, one hour. Introduction to phenomenon of globalization and broad range of cultural, economic, political, and social issues confronting globalized world today. Structured around three thematic categories—culture and society, governance and conflict, and markets—designed to capture principal dimensions of multifaceted connections among nation-states, nongovernmental organizations, ethnic, cultural, and religious groups, and populations around world. P/NP or letter grading.

10. International Diplomacy and Foreign Affairs. (2) Lecture, 15 hours; discussion, 15 hours. Limited to high school students participating in Model United Nations (UN) Summer Institute. One-week intensive summer course including lectures in international relations and outside study. Development of position papers in simulation of United Nations and final presentation in respective UN committees. Particular emphasis on public speaking and cooperative debate. May be repeated for credit without limitation. Offered only as part of Summer Institute. P/NP grading.

Upper Division Courses

100A. Globalization: Concepts and History. (5) Lecture, three hours; discussion, one hour. Enforced requisite: course 1. Introduction to concepts and history of globalization, addressing different processes and forms of globalization while attempting to develop methods and theories through which aspects of globalization can be more readily understood. Letter grading.

100B. Globalization: Contemporary Issues. (5) Lecture, three hours; discussion, one hour. Requisite: course 100A. Application of theoretical tools and historical perspective of course 100A to most pressing contemporary issues concerning globalization. Issues include globalization and Americanization; migration, culture, and identity; terrorism and civil war; global and regional governance; global media, entertainment, and communication; and globalization and inequality. Letter grading.

110A. Globalization in Context. (5) Lecture, six hours. Requisite: course 100B. Corequisite: course 110B. Culture, economy, history, and politics of different locations around world and how they are affected by globalization. Field trips included to gain first-hand experience of these processes. Offered in summer only. P/NP or letter grading.


160. Selected Topics in Global Studies. (4) Lecture, three hours; discussion, one hour (when scheduled). Examination of one or more topics related to global studies. May be repeated for credit with topic change. P/NP or letter grading.

188A-188B. Special Studies in Global Studies. (4-4) Seminar, three hours. Program-sponsored experimental or temporary courses, such as those taught by resident or visiting faculty members. May be repeated for credit with topic change. Letter grading.


192. Undergraduate Practicum in Global Studies. (2) Seminar, two hours; practicum, to be arranged. Limited to juniors/seniors. Training and supervised practicum for advanced undergraduate students to serve as undergraduate course assistants in global studies courses. Students assist in preparation and presentation of materials and development of innovative programs with guidance of faculty members. May not be applied toward major requirements. May be repeated for credit. P/NP grading.


199A-199B. Directed Individual Research in Global Studies. (2-4) Tutorial, one hour. Limited to senior Global Studies majors. Supervised individual research or investigation under guidance of faculty mentor. Individual contract required. Letter grading.

Graduate Course

375. Teaching Apprentice Practicum. (1 to 4) Seminar, to be arranged. Preparation: apprentice personnel employment as teaching assistant, associate, or fellow. Teaching apprenticeship under active guidance and supervision of regular faculty member responsible for curriculum and instruction at UCLA. May be repeated for credit. S/U grading.

HEAD AND NECK SURGERY

David Geffen School of Medicine

UCLA

62-132 Center for the Health Sciences
Box 951624
Los Angeles, CA 90095-1624
(310) 825-5179
fax: (310) 206-1393
http://headandnecksurgery.ucla.edu

Chair
Gerald S. Berke, M.D. (Victor Goodhill, M.D., Professor of Head and Neck Surgery), Chair

Scope and Objectives

The Department of Head and Neck Surgery academic programs consist of a nationally recognized residency program, medical school education, prestigious fellowships, and ongoing continuing medical education. A critical success factor in these academic efforts is the high level of clinical expertise demonstrated by all faculty members. Additionally, department faculty members have an active commitment to basic science and clinical research as an integral component of the program of instruction. These tenets not only ensure quality at every educational level, but also provide a superior milieu for the development of teacher-investigators.

The residency program is incorporated into the department’s patient care and research activities in six affiliated medical centers and exposes residents to all of the subspecialties during the course of their training. Medical student teaching is a combined effort by faculty members, fellows, and residents and consists of lectures, didactic learning, and hands-on experience in clinical and research settings. The department offers one- and two-year fellowships.

For further details on the Department of Head and Neck Surgery and a listing of the courses offered, see http://headandnecksurgery.ucla.edu.

HEALTH POLICY AND MANAGEMENT

Jonathan and Karin Fielding School of Public Health

UCLA

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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 policy and management 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 Policy and Management. 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://grad.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 Health Policy and Management offers Master of Science (M.S.), Doctor of Philosophy (Ph.D.), and Executive M.P.H. (EMPH) degrees in Health Policy and Management.

Health Policy and Management

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 healthcare 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. Assignment reading and tangible evidence of mastery of subject matter required. May be repeated for credit. Individual contract required. P/NP or letter grading.

Graduate Courses

200A-200B. Health Systems Organization and Financing. (4-4) Lecture, three hours; discussion, one hour. Limited to graduate health services students. In-depth analysis of health services systems in U.S., using relevant theories, concepts, and models. S/U or letter grading.

M202. Qualitative Research Design and Methodology for Indigenous Communities. (5) (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 methodologies (design, appropriate use), with emphasis on qualitative research methods, ethics, and special considerations in conducting research in American Indian country. Design of research and exploration of feasibility of researching topics. Letter grading.

M204A-M204B-M204C. Seminars: Pharmaceutical Economics and Policy. (1-1-2) (Same as Economics M204A-M204B-M204C.) Seminar, three hours every other week for three terms. Requisites: course M235, 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 (204A, 204B) and letter (M204C) grading.

205. Pharmaceutical Policy. (4) Lecture, three hours. Policy issues pertaining to pharmaceutical sector. Topics include determinants of expenditures on drugs, price setting in industry, health insurance coverage for pharmaceuticals, and research and development process. Letter grading.

206. Healthcare for Vulnerable Populations. (4) Lecture, three hours. Overview of health services issues associated with organization, financing, and delivery of healthcare services to vulnerable populations within domestic and international contexts to gain understanding of social, political, economic, and cultural issues that lead to disparities in access, quality, and cost of healthcare services that lead to vulnerability for particular population groups. Introduction to strategies that have been adopted to address these health disparities. Analysis and development of policy and management options that serve needs of vulnerable populations within healthcare system. Letter grading.

207. Current Topics in Health Services: Practice and Policy Perspectives. (2) Seminar, two hours. Required of Dr.P.H. students. Examination and discussion of 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/discussions by professionals in public health practice and healthcare management. S/U or letter grading.

215A. Healthcare Quality and Performance Management. (4) Lecture, four hours. Preparation: completion of summer internship requirement. Management and operations of individual units and organizations of healthcare systems. 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 they can be met on day-to-day basis. Emphasis on applied practice with an intent to improving student managerial competencies and on development of skills to manage operational processes in delivery of health services, primarily directed to improving effectiveness, efficiency, 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.

215B. Applied Methods for Improvement/Implementation Science. (4) Lecture, four hours. Enforced requisites: course 215A. Planning and management of improvement programs in current work of students and future roles as change agents and leaders of healthcare systems. Training in skills and analytic methods for improvement science in clinical settings and health systems. Completion of improvement projects that demonstrate student competence in improvement science. Emphasis on case studies and applications so students gain skills in improvement project design and implementation. Analyses of cases, individual improvement projects, and class discussions to allow students to apply this knowledge to organizational examples. Letter grading.

216. Special Topics in Health Services: Quality Assessment and Assurance. (4) (Formerly numbered 249F) Seminar, four hours. Fundamental issues in quality assurance, measurement, rapid cycle testing, breakthrough series, and interorganizational collaboration benefit quality and productivity. Letter grading.

217. Evidence-Based Medicine and Organizational Change. (4) (Formerly numbered 249F) Lecture, three hours. Requisites: 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 application and implementation of clinical guidelines. Emphasis on implications for health policy. Letter grading.

CM221. Tobacco: Prevention, Use, and Public Policy. (4) (Same as Community Health Sciences M223.) Lecture, two hours; discussion, two hours. Focus for 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 observational data. Exploration of conduct of health services research, alternative research paradigms, building conceptual models of what students are trying to study, designing and testing measurement instruments, and development of secondary data sources, study design, and its operationalization through regression models.

225C. Research Methods for Improvement/Implementation Science. (4) Lecture, four hours. Enforced requisites: course 215A. Development and implementation of studies of dynamic interrelations, including improvement initiatives and pragmatic clinical trials. Provides skills in research methods for improvement and implementation studies in clinical settings (including health services research and health systems). Completion of implementation research projects that demonstrate student competence in design and implementation. Research design and methods for conducting rigorous inferential evaluation in real world of implementation science, with emphasis on methods for generalizing results of improvement and implementation studies involving dynamic testing. Emphasis on applications so students gain skills in design and implementation. Letter grading.

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 (226A) and S/U (226B) grading.

227A. Special Topics in Health Services: Current Research Issues. (2 to 4) (Formerly numbered 249D) Lecture, four hours. Designed for doctoral students. Review of articles in health services journals nominated as best published during 1990. Analysis of articles to determine contribution to theory, methods, and/or implications for management or policy in health services organizations or health services as field. May be repeated for credit with topic change. Letter grading.

227B. Special Topics in Health Services: Seminar Series. (2 to 4) (Formerly numbered 249J) Seminar, two hours. Designed for doctoral students. Presentation of proposed or ongoing research projects by faculty members and discussion to determine relevant methodological and policy issues, as well as to offer constructive criticism. May be repeated for credit with topic change. Letter grading.

230. Principles of Organization Leadership. (4) (Formerly numbered 249D) Lecture, four hours. Designed for graduate students. Examination of principles and models of organization leadership, including presentation by current leaders in fields of health and welfare. Theories and empirical investigations of leadership qualities. Letter grading.

231. History of Public Health. (4) Discussion, three hours. Designed for doctoral students. Emphasis on topics which illuminate current issues in public health policy. Preparations to understand implications on healthcare providers, healthcare institutions, health-care reform movements, public health activities, childbirth, and AIDS. S/U or letter grading.

232. Leadership Capstone Seminar. (4) (Not same as course 232 prior to Fall Quarter 2011) Seminar, four hours. Preparation: completion of summer internship requirement. Designed for graduate students completing their master’s training in health management and health policy. Examination of leaders and leadership in healthcare and other organizations to provide 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 theories, styles and identify opportunities to further develop their leadership abilities. Letter grading.

M233. Health Policy Analysis. (4) (Same as Community Health Sciences M252) Lecture, three hours. Requisites: course 230 or 230A, M234, Biostatistics 100A, 100B. Conceptual and procedural tools for 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) Lecture, four hours. 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, mission, goals, structure, and processes of health services organizations. S/U or letter grading.

235. Law, Social Change, and Health Policy. (4) Lecture, four hours. Preparation: two upper division political science or sociology courses. Required: courses 100A, 100B, or 201. Introduction to legal systems and health policy. Examination of key health policy issues. Letter grading.

M236. Microeconomic Theory of Health Sector. (4) (Same as Public Policy M268) Lecture, four hours; discussion, two hours. Requisites: Microeconomics 100A, 100B or 201. Introduction to microeconomic concepts to analyze health services markets. Emphasis on applications to health service programs. S/U or letter grading.

237A. Special Topics in Health Services Research Methodology. (6) Lecture, four hours; discussion, two hours. Requisites: Biostatistics 200A, 200B or 201. Introduction to multivariate analysis techniques in health services research. Introduction to decision analysis and cost-effectiveness analysis. S/U or letter grading.

237B. Special Topics in Health Services Research Methodology. (6) Lecture, four hours; discussion, two hours. Requisites: courses 237A, 237B, Biostatistics 200A, 200B (or 201). Designed for doctoral students. Intended to teach students in statistical methods and techniques used in health services research, with focus on practical application of advanced regression models. Letter grading.

239A. Special Topics in Health Services: Introduction to Decision Analysis and Cost-Effectiveness Analysis. (4) (Formerly numbered 249G) Lecture, four hours. Requisites: courses 200A, 200B. Techniques to assess broad spectrum of medical technologies, including both therapeutic and diagnostic tests and procedures, clinical practice patterns, public health interventions, and pharmaceuticals. Demonstration of how decision analysis provides the framework for conducting various economic evaluations. May be repeated for credit with topic change. Letter grading.

239B. Special Topics in Health Services: Advanced Topics in Decision Analysis and Cost-Effectiveness Analysis. (4) Formerly numbered 249J. Lecture, four hours. Requisite: course 239A. How to conduct uncertainty analyses, understand methods used to construct quality-adjusted life years (QALYs), conduct Markov analyses, critically analyze large-scale published cost-effectiveness analyses (CEAs), effectively present strengths and limitations of published CEAs to peers, and use advanced features of TreeAge software to construct and analyze CEA models, including Markov models. May be repeated for credit with topic change. Letter grading.

240. Healthcare Issues in International Perspective. (4) Lecture, four hours. Preparation: two health administration courses, two upper division social sciences courses. Analysis of crucial issues in healthcare; manpower policy, economic support, health facilities, patterns of health service delivery, regulation, planning, and other aspects of healthcare systems probed in settings of European welfare states, developing nations, and socialist countries. S/U or letter grading.

241. Economics of Health Policy. (4) Lecture, four hours. Requisite: course M236 or doctoral standing. Second-level health economics course, with emphasis on health policy applications, designed to provide more nuanced view of health economics than does course M236. Provides more training for master’s students interested in policy, as well as material and in-

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sights for doctoral students who may find it useful in thinking about dissertation topics. Emphasis on special topics in health care, systems, as well as organizational aspects of implementing change.

M242. Determinants of Health. (4) (Same as Community Health Sciences M232.) Lecture; three hours; discussion, one hour. Designed for graduate students. Critical analysis of models for what determines health and illness, economics, environmental, genetic, health system, and other factors that influence health of populations and defined subgroups. Letter grading.


249A-249Z. Special Topics in Health Services. (2 to 4 each) Hours to be arranged. Requisites for each offering vary by department. Advanced seminars covering current issues and special topics in health policy, health financing, and organization and administration of health services. Sections offered on regular basis, with topics announced in preceding term. May be repeated for credit with topic change.

M249E. Advanced Topics in Health Economics. (4) (Same as Public Policy M266.) Seminar, four hours. Requisites: courses 200A, 200B, M236. Advanced treatment of number of topics in health economics, including mental health economics, pharmaceutical economics, and relationship between labor supply, welfare, and health. Letter grading.

M249Q. 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 editor of 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 outside speakers, as well as students, on research topics in cancer prevention and control, as well as other developmental issues such as grant writing, scientific review process, research funding, and other academic issues. Presentation of student research in progress as well as solicitation of feedback from class regarding grant proposals, manuscript submissions, and future directions for research. Possible reviews of assigned articles, with focus on particular topics in cancer prevention and control. S/U grading.

249S. Introduction to Science of Implementing Evidence-Based Practice. (4) Seminar, four hours. Requisites: courses 200A, 200B. Designed to provide basic understanding of science of implementing evidence-based practice. Through series of didactic teaching and interactive case discussions, introduction to integrated framework to understand key issues related to implementation of evidence-based practice and study of tools to apply evidence base to improving healthcare quality. Guest lecturers included who are nationally recognized experts in topic content areas. Interactive discussion and assignments based on readings closely related to lecture material. S/U or letter grading.

251. Quality Improvement and Informatics. (4) Lecture, four hours. Requisites: course 100, Biostatistics 100A. Focus on how quality improvement relates to concepts of healthcare quality measurement, process improvement, and information systems, as well as organizational aspects of implementing change.

M252. Medicare Reform. (4) (Same as Public Policy M267.) Lecture, three hours; outside study, nine hours. Designed for graduate students. Analytical and managerial skills learned earlier to be used to analyze problems with existing Medicare program to develop specific options for reforming features of program to accommodate coming pressures generated by retirement of baby-bom generation. Letter grading.

M255. Obesity, Physical Activity, and Nutrition Seminar. (4) (Same as Community Health Sciences M234.) Seminar, three hours; outside study, one hour. Designed for graduate students. Multidisciplinary introduction to graduate level to epidemiology, physiology, and current state of preventive and therapeutic interventions for obesity in adults and children, including public health policy approaches to healthy nutrition and physical activity promotion. 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 infectious disease, 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 involved in conducting health services research on clinical topics and populations. Topics include formulating appropriate questions, identifying sources, mechanism of conducting field studies, identifying funding sources, writing grants, and publishing findings. S/U or letter grading.

266A-266B. Community-Based Participatory Health Research: Methods and Applications. (4-4) Lecture, one hour; discussion, one hour; fieldwork, two hours. Limited to clinical scholars fellows. Mentoring field experiences with introduction to critical issues in conducting research in community settings. Review of assignments, interventions, and evaluation designs for community settings and discussion of practical issues in partnering with communities. Letter grading.

M269. Healthcare Policy and Finance. (4) (Same as Public Policy M269.) Seminar, three hours; outside study, six hours. Focus on detailed understanding of health insurance policies for public insurance (Medicaid and Medicare), uninsured, and health insurance reform. Examination of effects of managed care on health and costs, consumer protection movement, and rise of competitive marketplaces. S/U or letter grading.

M274. Health Status and Health Behaviors of Racial and Ethnic Minority Populations. (4) (Same as Psychology 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.

280. Health Reform: Policy, Research, and Implementation Issues. (4) Seminar, three hours. Requisites: courses 200A, 200B. Limited to second-year M.P.H. and doctoral students. Analysis of components of major federal healthcare reform legislative initiatives to identify important policy, research, and implementation issues. Application of principles of stakeholder analysis to understand how and why legislation was adopted. Examination of how legislation was adopted and Congress. Conducting of policy analyses of selected components through completion of written assignments. Examination of respective roles of federal and state government in implementing and administering various components. Identification of significant implementation and administrative challenges at federal and state levels and development of possible strategies for addressing those challenges. Letter grading.

M285. Ethical Theory and Applications in Public Health. (4) (Formerly numbered M249L.) (Same as Community Health Sciences M237.) Lecture, four hours. Requisites: courses 200A, 200B. Introduction to ethical theories and critical ethical issues pertaining to healthcare policy and healthcare management. Research, writing, and discussion on variety of topics related to public health, including professional associations, leadership, and systems thinking and improve student sensitivity to needs of patients, communities, and public health practitioners. How ethics are foundation of leadership. Letter grading.

296. American Political Institutions and Health Policy. (4) Lecture, three hours; discussion, one hour. To effectively participate in policy process as analyst, policymaker, advocate, or lobbyist, it is necessary to understand institutional and political context within which policy is made. Introduction to federal and state policy-making, with focus on healthcare policy. Discussion of federalism and constitutionalism, examination of stakeholders, public, interest groups, and nature of issue space for health policy. Structure and process of political institutions at federal level, Congress, President, executive agencies, courts, and administrative law. State responsibilities and federal-state relations. How analysis enters policy process with examination of roles of federal analytic agencies and private research and advocacy groups. 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 politics of health policy process, including effects of political structure and institutions; economic and social factors; interest groups, classes, and social movements; media and public opinion; and other factors. Letter grading.

288. Role and Impact of Technology on Health Services. (4) Lecture, four hours. Examination of role and impact of technology development in the U.S. from point of view of system itself. Exploration of various types of technologies for their policy, economic, and organizational impact. S/U or letter grading.

289. Healthcare Disparities. (4) Seminar, three hours. Limited to graduate students. Exploration of what constitutes and explains disparity in healthcare. Emphasis on understanding history of disparities in U.S. to understand current state of disparities, and on evaluation of effectiveness of tools to eliminate them, such as increasing insurance coverage and delivery of culturally competent healthcare. Examination of sociological models that explain disparities in healthcare and expansion and expansion on these models. Letter grading.

M290. Evolving Paradigms of Prevention: Interventions in Early Childhood. (4) (Same as Community Health Sciences M237.) Seminar, three hours; fieldwork, one hour. Designed for graduate students. Introduction to use of early childhood interventions as means of preventing adverse health and developmental outcomes. Concepts of developmental vulnerability, approaches to assessment, models of service delivery, evaluation and cost-benefit issues, funding, and other policy issues. Letter grading.

400. Field Studies in Health Services. (2 or 4) Lecture, three hours. Preparation for internship. Required of all graduating M.P.H. students. Continuation of summer placement in organizations for delivery, financing, and evaluation of health services. Preparation of consulting research proposal on organizational problem or project from summer internship. Exploration to selected professional development issues. Letter grading.

401. Public Health Informatics. (4) Lecture, three hours. Preparation of a comprehensive and understanding of basic information technologies. Recommended requisite: course 251. Introduction to field of public health informatics and examination of impact of information technology on public health. Entire process, from systems conceptualization and design to project planning and development to system implementation and use. Letter grading.

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411. Issues in Cancer Prevention and Control. (4) (Same as Community Health Sciences M411.) Lecture, four hours. Designed for juniors/seniors and graduate students. Introduction to causes and characteristics of cancer epidemic, cancer control goals for nation, and interventions designed to encourage smoking cessation/prevention, cancer screening, and other dietary, psychosocial, and lifestyle changes. Letter grading.

415. Organizational Analysis. (4) Seminar, four hours. Introduction to important questions and perspectives relevant to understanding organizational behavior and change in healthcare and public health environments. Active paradigms in organizational theory, particularly perspectives important for understanding delivery system change. Examination of empirical research to clarify how important organizational constructs have been operationalized and to highlight methodology-related challenges of studying organizations in healthcare/public health. Letter grading.

420. Child and Family Health Program Community Leadership Seminar. (2) (Same as Community Health Sciences M420.) Seminar, two hours. Designed for graduate students. Examination of characteristics of community-based organizations (CBOs) and role of leadership in decision-making processes 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 (i.e., external validity) and evaluation designs that have emerged (e.g., pragmatic and adaptive designs). Letter grading.

422. Principles of Health Services: Theory and Methodology. (4) (Same as Sociology M422.) Lecture, four hours. Requisites: courses 200A, 200B. Introduction to evaluation of health services programs and policies. Emphasis on basic theoretical concepts and specific evaluation methodologies and designs. Letter grading.

423. Advanced Evaluation Theory and Methods for Health Services. (4) Lecture, four hours. Designed for departmental M.S. and Ph.D. students. Familiarity with current theoretical concepts in evaluation to gain skills in integrating theory into program implementation and evaluation design. Development of student ability to apply various evaluation methodologies most appropriate to variety of settings both within and outside health care and public health, and consideration of advantages and disadvantages of particular designs. Emphasis on evaluation designs and methodologies that have evolved to identify, assess, and meet special needs of children, and adolescents with developmental disabilities or chronic illness and their families. Letter grading.

424. Child and Family Health Program Community Leadership Seminar. (2) (Same as Community Health Sciences M424.) Seminar, two hours. Designed for graduate students. Examination of characteristics of community-based organizations (CBOs) and role of leadership in decision-making processes 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 (i.e., external validity) and evaluation designs that have emerged (e.g., pragmatic and adaptive designs). Letter grading.

431. Organizational Behavior and Human Resources in Healthcare Organizations. (4) Requisite: four hours. Examination of specific human resource policies 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.


434. Building Advocacy Skills: Reproductive Health Focus. (4) (Same as Community Health Sciences M434.) Seminar, four hours. Requisite: one prior health policy course such as Community Health Sciences 247 or Health Policy 235. Designed for School of Public Health graduate and doctoral students. Skills-building course to develop competencies in assessing, developing, and implementing advocacy strategies for reproductive health initiatives. Introduction to legislative and community advocacy initiatives, proposal development, surveying policy analysis and development of resources necessary for legislative advocacy. Identification of advocacy goals and objectives, development of advocacy plan, coalition building, organizational capacity building, media relations, and message development for various audiences. Students learn about range of former and current reproductive health advocacy campaigns. Letter grading.


437. Legal Environment of Health Services Management. (2) Lecture, two hours. Requisites: courses 200A, 200B. General survey of legal aspects of health services management, including governance, agency, informatics, the legal malpractice, and contracts. S/U or letter grading.

438. Issues and Problems of Local Health Administration. (4) Lecture, three hours. Preparation: one hour. Lecture course. Requisites: course 100, Epidemiology 10A. Overview of administrative issues currently faced by local health departments, including providing public health programs during fiscal constraint, quality improvement, interagency relationships and partnerships, and political and public interactions. Letter grading.

439. Dental Care Administration. (4) Lecture, three to four hours. Requisites or corequisites: Biostatistics 100A, 100B. Examination of several specific dental care policy issues: manpower, relationship of treatment to disease, national health program strategies, and evaluation mechanisms. Letter grading.

440. Health 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, with emphasis on 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. 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 health information systems and individual investigation in methods of obtaining and processing data to meet needs of programs in institution and agency. Introduction to principles of medical auditing; analysis of medical and health services. S/U or letter grading.


449A-M449B. Child Health, Programs, and Policies. (4-4) (Same as Community Health Sciences M436A-M436B.) Lecture, four hours. Requisite: course 100. Course M449A is requisite to M449B. Examination of history of child health policy trends and determinants of health and function of health service system; needs, programs, and policies affecting especially at-risk populations. Letter grading.


501. Cooperative Program. (2 to 8) Tutorial, to be arranged. Preparation: consent of UCLA graduate adviser and graduate dean. Tutorial course. Designed for graduate students in cooperation with USC. No more than 8 units may be applied toward master’s degree minimum total course requirement. S/U option.

596. Directed Individual Study or Research. (2 to 8) Tutorial, to be arranged. Limited to graduate students in healthcare e-commerce/Internet/new media area, with emphasis on general background, review of applications, and discussion of organizational and managerial issues dealing with successful use and implementation of technologies. S/U or letter grading.
History

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Christopher Ehrle, Ph.D.
Benjamin A. Elman, Ph.D.
Saul P. Friedlander, Ph.D. (1939 Club Professor Emeritus)
Frank O. Gellat, Ph.D.
Patrick Geary, Ph.D.
Carlo Ginzburg, Laurea in lettere (Franklin D. Murphy Professor Emeritus of Italian Renaissance Studies)

Associate Professors

Eric R. Avila, Ph.D.
Stephen A. Bell, Ph.D.
Rafan'an S. Boustan, Ph.D.
Joe T. Braslowsk, M.D., Ph.D., in Residence
Scott D. Brown, Ph.D.
Robin L.H. Derby, Ph.D.
Stephen F. Frank, Ph.D.
Andrea S. Goldman, Ph.D.
Kelly Lytle Hernández, Ph.D.
Frank Tobias Higbie, Ph.D.
Katsuya Hirano, Ph.D.
Vinay Lai, Ph.D.
Ghislaine E. Lydon, Ph.D.
William Marotti, Ph.D.
Muriel C. McClendon, Ph.D.
Kathryn Norberg, Ph.D.
David D. Phillips, Ph.D.
Kathryn Norberg, Ph.D.
Muriel C. McClendon, Ph.D.
Kathryn Norberg, Ph.D.
David D. Phillips, Ph.D.

Assistant Professors

Sebouh David Astanian, Ph.D. (Ricchan Hovannisian Professor of Modern Armenian History)
Benjamin L. Madley, Ph.D.
Peter J. Stacey, Ph.D.

Senior Lecturer S.O.E.
S. Scott Barchty, Ph.D., Emeritus

Lecturers

Mary F. Corey, Ph.D.
John S. Langdon, Ph.D.

Adjunct Professor

Robert C. Ritchie, Ph.D.

Adjunct Associate Professor

Amir Alexander, Ph.D.

Scope and Objectives

History is the study of the past of our own society and how it emerged out of the traditions that produced it. At the same time, self-knowledge for students of history comes not only from self-discovery, but by 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 an 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 premajors requirement; 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),...
The honors program is designed for History majors who are interested in completing a year-long research project that culminates in an honors thesis. A 3.5 departmental grade-point average is required for admission. To graduate with departmental honors, students must have a cumulative or overall GPA of at least 3.0 in all University-level coursework and at least a 3.5 GPA in all coursework required for the major.

The honors thesis must be completed in three terms, on the basis of work carried out in History 198A, 198B, and 198C. Students must register their intention to undertake an honors thesis with the undergraduate affairs vice chair no later than Spring Quarter of their junior year.
culture in medieval and early modern Europe. Manner in which men and women sought to explain, order, and control their lives by embracing the sacred and secular, and in which they encountered religious experiences and dreamed of apocalyptic and witchcraft. Examination of experiences in context of genesis of the state, birth of a new science, and economic and social change. 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. Examination of earlier mind-set before 1700 when into science fitted elements that came eventually to be seen as magical. How Western cosmologies became “disenchanted.” Magical tradition transformed into mysticism, Political implications of these movements; science in totalitarian settings as well as “big science” during the Cold War. Discussion of anti-science and cult movements. 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. Scientific revolution of 17th century: sciences involving transformation from Aristotelian to Newtonian cosmology, mechanization of natural world; 17th century 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. In this period science 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 startling new physics of relativity and the quantum, and of nuclear weapons, to molecular reductionism in biology and campaigns for statistical objectivity, examination of involvement of science in technological, military, intellectual, and political changes of the 20th century. P/NP or letter grading.

3CH. Introduction to History of Science: History of Modern Science, Relativity to DNA (Honors). (5) Lecture, three hours; discussion, two hours. Honors course parallel to course 3C. P/NP or letter grading.

3DH. Themes in History of Medicine. (5) Lecture, three hours; discussion, two hours. Examination through illustrated lectures and focused discussion of primary sources, of five important themes in development of modern medicine: nature of diagnosis, emergent therapies, economics, conception and planning of hospital, and use of medical technology. P/NP or letter grading.

M4. Introduction to History of Religions. (5) Formerly numbered 4.) (Same as Religion MA.) Lecture, three hours; discussion, two hours. Comparative study of eight major religious traditions, with emphasis on their beginnings and subsequent 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.

5. Holocaust: History and Memory. (5) Lecture, three hours; discussion, two hours. Holocaust, murder of six million Jews by Germans in Nazi-occupied Europe, Europe, was one of the most terrible events in modern history. Examination of origins of Holocaust, perpetrators and victims, and changing efforts to come to terms with this genocide. Exploration of forces that led to Holocaust, including emergence of scientific racism, anti-Semitism, and machinery of modern state. Consideration of debates about implementation of genocide, including significance of gender and sexuality, relationship between war and genocidal acts, imprecision of racism and anti-Semitism, and political and philosophical implications of Holocaust. Exploration of how genocide of European Jewry was intertwined with targeting of other victims of Nazi rule, including Roma, Slavs, black Germans, disabled, homo- sexuals, and religiously segregated populations of National Socialism. P/NP or letter grading.

6A. Colonial Latin America (Honors). (5) Lecture, three hours; discussion, two hours. 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 civil 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.

6AH. Colonial Latin America (Honors). (5) Lecture, three hours; discussion, two hours. Honors course parallel to course 6A. P/NP or letter grading.

6B. Political Economy of Latin American Underdevelopment, 1750 to 1930. (5) Lecture, three hours; discussion, two hours. Exploration of history of Latin America — genesis of characteristic Chinese institutions and modes of thought from antiquity to 1000. Focus on social, political, intellectual, and economic aspects of early and middle empires, 1100 to 1500. Survey of later history of China — evolution of characteristic Chinese institutions and modes of thought from 1000 to 1500. Focus on social, political, intellectual, and economic aspects of late empires and rise of modern China in contemporary era. P/NP or letter grading.

6A-11A. History of China (Honors). (5—5) Lecture, three hours; discussion, two hours. Honors sequence parallel to courses 11A, 11BH or letter grading. 11AH. To 1000 (Honors); 11BH, 1000 to 1950 (Honors).


20. World History to A.D. 600. (5) Lecture, three hours; discussion, two hours. Focus on 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 states, development of kingship, 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 1760. (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 seventy people, including people and cultures outside of their own. P/NP or letter grading.

22. Contemporary World History, 1760 to Present. (5) Lecture, three hours; discussion, two hours. Broad thematic survey of world history since the mid-18th century. Examination of 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.
94. History Research Methods and Strategies. (1) Formerly numbered 95.) Seminar, one hour. Development of competency with identifying, locating, critically evaluating, and using information in print, electronic, and other formats. Flow of information in variety of disciplines, how to approach research problems systematically, how to access and evaluate information in variety of formats, and how to formulate effective searches and search in electronic databases and on Internet. P/NP or letter grading.

96W. Introduction to Historical Practice. (5) Seminar, three hours. Enrolled as specified in Schedule of Classes. Open only to students who have declared the History major or minor. Corequisite: history course. Not open for credit to students with credit for former course 99W. Introduction to study of history, emphasis on historical theory and research methods. Satisfies University Writing Requirement. Letter grading.


97A-97O. Introduction to Historical Practice: Variable Topics. (4 each) Seminar, three hours. Discussion classes of no more than 15 students. Introductions to and discussions of historical practice. In some classes, supplemented by a GE lecture course; see Schedule of Classes for specific requisite lecture and seminar topics. Designed for sophomores/juniors. Exploration of aspects of lecture topics, readings, images, and discussions. P/NP or letter grading.

100. History and Historians. (4) Lecture, three hours; discussion, one hour (when scheduled). Emphasis on historical theory and research methods. Satisfies University Writing Requirement. Letter grading.

101. Topics in World History. (4) (Same as Ancient History 101.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Introduction to the study of world history. Survey of the world from prehistory to the present. Topics include the emergence of the modern world. Three hours of lecture and discussion per week. P/NP or letter grading.

102A-102B. Historical Archaeology. (4-4) (Same as Anthropology 102A-102B.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Art of psychological and historical interpretation; assessment of recent writings in the field. P/NP or letter grading.

105A-105B-105C. Survey of Middle East, 500 to Present. (4-4-4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. A historical overview of the Middle East from 500 B.C.E. to the present. Emphasis on the development of Islamic culture in Western Europe. P/NP or letter grading.

105A. Survey of Near East M104A. (Same as Ancient Near East M104A.) Lecture, three hours. Overview of Sumer and Dynastic Successor States and Modern Nation in the Near East. Overview of political, social, economic, and religious history of Middle East. P/NP or letter grading.

105B. Religion and Society in Modern Middle East. (4) Lecture, three hours. Examination of the role of religion, law and political ideologies on commercial law, gender, religion, and material culture. Themes of foreign domination and national identity, postindependence legal and political ideologies. P/NP or letter grading.

106A-106B. Religion and Society in Modern Middle East. (4-4) (Formerly numbered 106A.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Religion and society in the Middle East. Topics include the role of religion in shaping a Middle Eastern identity. P/NP or letter grading.

107A-107B-107C. Armenian History. (4-4-4) Lecture, three hours; discussion, one hour (when scheduled). Designed for seniors. The history of Armenia from prehistory to the present. Topics include the Armenian genocide, the role of religion in shaping a Armenian identity, and the role of religion in shaping a Middle Eastern identity. P/NP or letter grading.

107A. Introduction to Armenian Oral History. (4) Lecture, three hours; discussion, one hour (when scheduled). Designed for seniors. The history of Armenia from prehistory to the present. Topics include the Armenian genocide, the role of religion in shaping a Armenian identity, and the role of religion in shaping a Middle Eastern identity. P/NP or letter grading.

107B. Armenian Civilization. (4-4-4) (Same as Ancient Near East M107B.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Uses and themes of Armenian oral history. Topics include the role of religion in shaping a Armenian identity, and the role of religion in shaping a Middle Eastern identity. P/NP or letter grading.

107C. Caucasus under Russian and Soviet Rule. (4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. The history of the Caucasus region since 1801. Georgian, Armenian, and Azerbaijani response to Russian and Soviet rule, including mass deportations and the Soviet national republcs. 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 West (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.


109A. Early Modern State in Mediterranean. (4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Emergence of the Ottoman Empire. Focus on the rise of modern nation-states in the region. P/NP or letter grading.

109B. Palestine, Zionism, and Evolution of Israeli-Palestinian Conflict. (4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Exploration of origins of Arab-Israeli dispute from mid-19th century through founding of state of Israel and expulsion/flight of three quarters of million Palestinians from their homes. Exploration of social history of Palestine up to Zionist colonization, origins of Zionism and Palestinian nationalism, varieties of Zionism, Zionism and colonialism, seminal events and their consequent symbolic connotations. P/NP or letter grading.

110C. Israeli Legal History. (1 to 5) Lecture, three hours. Israel is settler society inspired by utopian ideology based on war and conquest. The legal system of Israel is imperfect democracy committed to notions of equality yet divided along class, gender, and ethnic lines. Law 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, replication of English law after British conquest, law and national identity, post-independence legal change and continuity, formalism and rights discourse, ethnic conflict and land law, influence of political ideologies on commercial law, gender, religion, and law, role of courts in shaping historical memory. P/NP or letter grading. Concurrently scheduled with course CM209. P/NP or letter grading.

110A-110B-110C. Iranian Civilization. (4-4-4) (Same as Ancient Near East M110A-110B-110C and Iranian M110A-110B-M110C.) Lecture, three hours; discussion, one hour (when scheduled). History of ancient Iran from rise of Elam to end of Sassanian dynasty. Emphasis on Persian civilization and modern Iran, and Persian civilization and modern Iran. 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 distinctly national unit, demystifying Iranian history and distinguishing its peculiarities, Safavid Empire, economy, imperialism, modernity, construction of Iranian state, religion and politics, 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. Premodern. Examination of major issues in history of Middle East, 111B. Early Modern. Examination of Is- tanbul, Ottoman Empire (4153 to 1923); relation between history and literary imagination and view of history as dialogue between past and present; scholarly debate on urban history of early-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 culminated in emergence of nation-state. P/NP or letter grading.

M112C. History of Ancient Mediterranean World. (4) Formerly numbered 112C. (Same as Classics M112C) Lecture, five hours. Intensive on-site study of history and culture of ancient Rome from founding of city to conversion of Christianity. Part of UCLA Summer Travel Program, P/NP or letter grading.

112D. History and Monuments of Ancient Greece: Field Studies. (4) Formerly numbered 112D. Enforced corequisite: course 112B. Examination of history, art, and monuments of ancient Greece through daily lectures and field visits to museums and archaeological sites. Part of UCLA Summer Travel Program, P/NP or letter grading.

M112E. History and Monuments of Rome: Field Studies. (4) Formerly numbered 112E. (Same as Classics M112E) Lecture, five hours. Intensive on-site study of history and culture of ancient Rome from founding of city to conversion of Christianity. 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. Introduction to topics in Greek and Roman history, including Roman law, ancient Greek and Roman slavery, world of Caesar Augustus, life and times of Alexander the Great. May be repeated for maximum of 16 units with topic and/or instructor change. P/NP or letter grading.


119A-119B. Medieval Europe. (4-4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Introduction to topics in Western Europe from Latin antiquity to age of discovery, with emphasis on medieval life of Greco-Roman antiquity, history of the Middle Ages, and growth of literacy. P/NP or letter grading. 119A. 400 to 1000. 119B. 1000 to 1500.

119C. Medieval Civilization: Mediterranean Heartlands. Lecture, three hours; discussion, one hour (when scheduled). Designed for seniors/juniors. Survey of Western Mediterranean Europe, social/economic/cultural within political 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, role of women, economics, 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 changes of peripheral 16th-century capitalism, efforts to modernize, and consequences of its partial failure in economy, political, and culture. 120B. Short 20th Century, 1918 to 1990. Crisis and collapse of the Old Regime, new political forms, and rise of socialism. P/NP or letter grading.


120D. Film and History: Central and Eastern Europe, 1945 to 1988. 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 themes of 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 seniors/juniors. Reorganization of power, new forms of representation, and discourses about rule and obedience in Europe from mid-15th through 16th century; popular culture; peasant society; refashioning of religion and power; local reactions to modernity.

121B. Baroque Culture and Absolutist Politics, 1600 to 1715. (4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Changing nature of state and social domination; redefinitions 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, upheavals of 1848, unification of Germany and Italy, imperialism, rise of socialism, population growth, changes in social structure, 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 II, origins and persistence, construction of international crises in West, de-Stalinization, decolonization, crisis of welfare state, background to and course of 1989 revolutions, current political configuration. 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 seniors/juniors. P/NP or letter grading. 123A. 1650 to 1815. Survey of military and diplomatic history, seen in relation 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 Cold War. Great powers and their allies and clients in Europe, Asia, and Latin America.

of American society in English North America from 1600 to 1763. Emphasis on interaction of three con
temporary cultures: Western European, West African, and American Indian. P/NP or letter grading.
138B. Revolutionary America, 1760 to 1800. (4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Inquiry into origins of American Revolution, nature of revolutionary process, creation of constitu
tional national government, and development of capital
ist economy. P/NP or letter grading.
138C. U.S. History, 1800 to 1860. (4) Lecture, three
hours; discussion, one hour (when scheduled). De
designed for juniors/seniors. Discussion of major social,
political, economic, and cultural transformations of
first half of 19th century and how these changes helped to drive wedge between North and South.
P/NP or letter grading.
139A. U.S. Civil War and Reconstruction, (4) Lec
ture, three hours; discussion, one hour (when sched
duled). Designed for juniors/seniors. Roles of sectionalism, antislavery crusade, formation of Confederate States; war years; political and social reconstruction. P/NP or letter grading.
139B. U.S., 1870 to 1900. (4) Lecture, three hours;
discussion, one hour (when scheduled). Designed for
juniors/seniors. American political, social, and institu
tional history in period of great change. Emphasis on altering concepts of role of government and respons
es to issues of the period. P/NP or letter grading.
140A-140B-140C. 20th-Century U.S. History. (4-4-
4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. P/NP or let-
ter grading. 140A. 1900 to 1928. Political, economic, intellec
tual, and cultural aspects of American democracy.
140B. 1929 to 1960. Political, economic, intellec
tual, and cultural aspects of American democracy.
140C. Since 1960. History of political, social, and diplo
matic developments that have shaped U.S. since 1960.
141A-141B. American Economic History. (4-4) Lec
ture, three hours; discussion, one hour (when sched
duled). Designed for juniors/seniors. P/NP or letter grading. 141A. 1790 to 1910. Roles of economic forc
es, institutions, individuals, and groups in promoting or impeding effective change in American economy from 1790 to 1910. During this period technical skeleton of modern industrial structure was formed. Why and how American economy evolved into dual econo
my, characterized by center of firms large in size and influence and independent businesses. (Same as Econ 1910 to Present. Dynamics of change in dual economy, with focus in greater detail on interrelationships be
tween macro and micro developments in economy and on growing interdependence between U.S. and world economies.) P/NP or letter grading.
142A-142B. Intellectual History of U.S. (4-4) Lec
ture, three hours; discussion, one hour (when sched
eduled). Designed for juniors/seniors. Principal ideas about humanity and God, nature and society, that have been at work in American history. Sources of these ideas, their connections with one another, their relationship to American life, and their expression in great documents of American thought. P/NP or letter grading.
M142C. History of Religion in U.S. (4) (Formerly numbered 142C.) (Same as Religion M142C.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Consideration of reli
gious dimension of people’s experience in U.S. Exam
ination of number of religious traditions that have been important in this country, with emphasis on rela
tion between religion to other aspects of American culture. P/NP or letter grading.
142D. American Popular Culture. (4) Lecture, three hours; discussion, one hour (when scheduled). Rec
tended requisites: courses 13B, 13C. Designed for juniors/seniors. Survey of American cultural history since 1865, with emphasis on historical development of urban, consumer-oriented American mass culture that enveloped diverse groups of Americans as pro
ducers and consumers. Historical development of American popular culture according to changing set of political, economic, and social circumstances. Evo
nution of national and global framework for mass circu
lation of new ideas, products, and practices, as well as ar
rive of new technologies that enabled that develop
ment. 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 Con
stitutionalism in U.S. Particular emphasis on framing of Federal Constitution in 1787 and its subsequent in
terpretation. Judicial review, significance of Marshall
Court, and effects of slavery and Civil War on Consti
tution. 143B. Constitutionalism since Civil War. Partic
ular emphasis on development of Supreme Court, due process revolution, Court and political questions, and fact of judicial supersession within self-prescribed limits.
144. America in World. (4) Lecture, three hours; dis
cussion, one hour (when scheduled). Designed for ju
iors/seniors. Reconsideration of U.S. exceptionalist approach to national self-understanding by rethink
ing crucial aspects of American history in more interna
tional context that goes well beyond foreign relations
and international affairs to recontextualize aspects of American economic, intellectual, cultural, and social his
story. Consideration of transnational flows of people, ideas, goods, wealth, and politics, as well as comparative study of all these things and more. P/NP or letter grading.
M144C. Critical Issues in U.S.-Philippines Relations. (4) (Same as Asian American Studies M171D.) Lec
ture, three hours; discussion, one hour (when sched
tion of complex interrelationship between U.S. colo
nialism, Philippine nationalism, history of Filipino Américans, and Philippine diaspora in 20th century.
P/NP or letter grading.
145A-145B. U.S. Urban History. (4-4) Lecture, three hours; discussion, one hour (when scheduled). De
signed for juniors/seniors. Introduction to major them
es 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.
145C. History of Deaf Communities in America. (4) (Same as American Sign Language M120.) Lecture, three hours; discussion, one hour (when sched
eduled). Designed for juniors/seniors. Study of history and culture of deaf communities in America (circa 1800 to present) by exploring major events impacting deaf community, including growth of sign language, deaf education, audism, politics of deafness, eugenics, deaf revolution movements, and role of hearing technology. Historical development of emergence, growth, and survival of deaf community and development of deaf identity over time. P/NP or letter grading.
149A-149B. North American Indian History. (4-4) Lecture, three hours; discussion, one hour (when sched
eduled). Designed for juniors/seniors. History of Native Americans from contact to present, with em
phasis on historical dimensions of culture change, in
dependent political processes, and continuity of Native American cultures. Focus on selected Indian peoples in each period. P/NP or letter grading. 149A. Precon	act to 1830; 149B. 1830 to Present.
M150A. Comparative Slavery Systems. (4) (Same as Afro-American Studies M158A.) Lecture, three hours; discussion, one hour (when scheduled). De
signed for juniors/seniors. Examination of slavery ex
periences 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.
M150B-150C. History of African America. (4-4) (Same as Afro-American Studies M158B-M158C.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/se
nors. Survey of African-American experience, with em
phasis on three great transitions of African-American life: transition from Africa to New World slavery, transition from slavery to freedom, and transition from rural to urban/millieu. 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 gospel, blues, jazz, rhythm and blues, and many other musical styles, offer students unique window into recent African American history. P/NP or letter grading.
M150E. African American Nationalism in First Half of 20th Century. (4) (Same as Afro-American Studies M158E.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Criti
cal examination of African American search in first half of 20th century for national/group cohesion through collectively built institutions, associations, organized protest movements, and ideological self-definition. P/NP or letter grading.
M151A. History of Chicano Peoples. (4) (Same as Chicana and Chicano Studies M151A.) Lecture, three hours; discussion, one hour (when scheduled). De
signed for juniors/seniors. Survey lecture course on historical development of Mexican (Chicano) community and people of Mexican descent in the United States from the 17th to the 19th centuries, with special focus on labor and politics. Provides integrated understanding of change over time within Mexican American community by inquiry into major formative historical and policy issues affecting community. Social structure, economy, labor, culture, political organization, conflict, and international relations. Examination of social, economic, political, and cultural development of Los Angeles and its environs from its founding to present. Emphasis on diverse peoples of Los Angeles area, including Mexican immigrants, and examination of various interpretations of city, and Los Angeles’ place among American urban centers. P/N or letter grading.

156. Topics in U.S. History. (4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Examination of specific historical themes and/or major issues in U.S. history. P/N or letter grading.

157A. Early Latin America. (4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Advanced survey of Latin American history from conquest to independence, with empha- sis on society, culture, and ethnic aspects. P/N or letter grading.

157B. Indians of Colonial Mexico. (4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Survey of social and cultural history of Indians of Mexico, especially central Mexico, from time of European conquest until Mexican independence, with emphasis on internal view of Indian groups and patterns on basis of records produced by Indians themselves. P/N or letter grading.

159. Latin America in 19th Century. (4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Intensive analysis of economic, social, and political problems of Latin American nations from their independence to around 1910. P/N or letter grading.

160A. Latin American Elitlore. (4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Elitlore (defined as oral or noninstitutionalized knowledge involving leaders’ conceptual and perceptual life history views) in contrast to folklore (followers’ traditional or popular views). Elitlore genres include oral history, literature, and cinema. P/N or letter grading.

160B. Mexican Revolution since 1910. (4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Examination of concept of revolutionary community, Mexican Revolution as a process of permanent revolution under one-party democracy, analysis of unresolved colonial and 19th-century problems and crises that have influenced modern-day Mexico, if in modified form. P/N or letter grading.

161. Topics in Latin America History. (4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Examination of major issues in history of Latin America. May be repeated for credit with change in units with topic and/or instructor change. P/N or letter grading.

162A. Modern Brazil. (4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Selection of topics, political, economic, social, and cultural development of Brazil, with emphasis on modernization and struggle for change, 1850 to present. Discussions, films, slides, and guest speakers supplement and complement lectures. P/N or letter grading.

162B. Brazil and Atlantic World, 1500 to 1822. (4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Study of development of colonial society in Brazil from discovery to independence in 1822, placing it in context of Portuguese overseas expansion in Asia, Africa, and Americas, and also on Portuguese, indigenous, and African roots of modern Brazil. P/N or letter grading.

162C. History of Argentina. (4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. History of political, social, and cultural developments that have shaped Argentina from colonial time to present. Emphasis on 19th-century development of agro-export economy and 20th-century formation of mass society. P/N or letter grading.

164. Africa and Slave Trade. (4) Lecture, three hours; discussion, one hour (when scheduled). Preparation: one prior course in African history at UCLA. Designed for juniors/seniors. Social, economic, and political aspects of slave trade on African society, with emphasis on Atlantic trade without noticing those of ancient Mediterranean, Islamic, and Indian Ocean worlds. Abolition and African diaspora. P/N or letter grading.

165C. Understanding Whiteness in American History and Chicana and Chicano Studies CM182.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. History, construction, and representa- tion of whiteness in U.S. society. Readings and discussions trace evolution of white identity and explore its significance to historical construction of race class in American history. P/N or letter grading.

165D. Chicana Historiography. (4) (Same as Chicana and Chicano Studies CM182.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Examination of Chicana and Chicano historiography, looking closely at how practice of writing of history has placed Chicanas into particular narra- tives. Using Chicana feminist approaches to study of history, revisiting of specific historical periods and moments such as Spanish Conquest, Mexican Period, American Revolution, and Chicano Movement to excavate untold stories about women’s participation in and contribution to making of Chicana and Chicano history. P/N or letter grading.

165E. Latino Metropolis: Architecture and Urban-ism in Americas. (4) (Same as Chicana and Chicano Studies CM182.) Lecture, four hours. Introduction to history of architecture and urbanism in Americas, from fabled cities of Aztec empire to barrios of 21st-century Los Angeles and Mi- ami. Emphasis on role of cities in Latin/Latino experi- ence and uses of architecture and city planning to forge new social orders in historical ex- periences of conquest, immigration, nationalization, and revolution. P/N or letter grading.


153. American West. (4) Lecture, three hours; dis- cussion, one hour (when scheduled). Designed for juniors/seniors. Study of West as frontier and as region, in transit from Atlantic seaboard to Pacific, from 17th century to present. P/N or letter grading.
166A-166B. History of West Africa. (4-4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors, P/NP or letter grading. 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. Survey of current trends of research. 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, migrations, arts, slavery, and slave trade. Roles of economic forces and institutions in promoting or inhibiting economic change in West Africa; ethnicity 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. History of Ethiopia, Sudan, and Somalia in regional context of northeast 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. Survey of history of cultural development of east Africa from earliest times to growth of complex societies, its place within wider Indian Ocean system, and colonial conquest to gaining of independence and postcolonial challenges. P/NP or letter grading.

167C. History of Southern Africa. (4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Survey of history of central Africa from earliest times, with emphasis on establishment of agriculture, growth of trade, rise of states, and incorporation of region into world economy. P/NP or letter grading.


169A-169B. Thought and Society in China. (4-4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. History of overseas Indian peoples and their interactions to 1870. 168B. Since 1870. Interactions between inhabitants of southern Africa since 1870.

170A. Culture and Power in Late Imperial China. (4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Attention to social and economic as well as political aspects. P/NP or letter grading. 168A. Origins to 1800. Origins of South African peoples and their interactions to 1670. 168B. Since 1670. Interactions between inhabitants of southern Africa since 1870.

170A. Culture and Power in Late Imperial China. (4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Attention to social and economic as well as political aspects. P/NP or letter grading. 168A. Origins to 1800. Origins of South African peoples and their interactions to 1670. 168B. Since 1670. Interactions between inhabitants of southern Africa since 1870.

170B. Selected Topics in Chinese History from 1600 to 1949. (4) Lecture, three hours; discussion, one hour (when scheduled). Recommended requisite: course 11B. Designed for juniors/seniors. Selected topics that may vary from year to year. Recent offerings include law, society, and culture; society and economy; and modern China. May be repeated for maximum of 16 units with topic and/or instructor change. P/NP or letter grading.

171C. History of Women in China, A.D. 1000 to Present. (4) (Same as Gender Studies M171C.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Topics include women and family, women in Confucian ideology, women in literate culture, feminist movement, and women and communist revolution. P/NP or letter grading.

172A-172B. 172C. Japanese History. (4-4-4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Japanese history, including political, economic, and cultural development of Japan from prehistory to present. P/NP or letter grading. 172A. Ancient, Prehistory to 1600; 172B. Early Modern, 1600 to 1868; 172C. Modern, 1868 to Present.


173B. Women in 20th-Century Japan. (4) (Same as Gender 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 (1890s to 1990s). P/NP or letter grading.

173C. Shinto, Buddhism, and Japanese Folk Religion. (4) (Formerly numbered 173C.) (Same as Religion M173C.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Japanese folk religion, social dimension of various ways, great and little; Shinto's connection with cultural nationalism, Buddhism's medieval Reformation and Zen's relation to warrior culture, folk religious 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 Britain India I, II, (4-4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. P/NP or letter grading. 174B. Examination of expansion of British rule, the ideology, the amalgamation, constitution of India as oriental despotism, epidemiological project of state, and other modes by which British achieves its expansion. Designed for juniors/seniors. P/NP or letter grading. 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. (Formerly numbered 174D.) (Same as Religion M174D.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Historic 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. (Formerly numbered 174E.) (Same as Religion M174E.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Examination of interplay of factors that, from Christian missionaries to Islamic madrasa schools and colonial rebellions, gave shape to multifaceted Muslim reformation in context of colonial modernity. P/NP or letter grading.

175A. Cultural and Political History of Contemporary South Asia. (4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Problem of modernity; partition of India and emergence of Pakistan; political, social, ecological, and women's movements; struggle for rights and conflicts of identity among Muslims, Hindus, and Sikhs; terrorism in Sri Lanka and Pakistan; public culture, popular cinema, and street life. P/NP or letter grading.

175B. Indian Identity in U.S. and Diaspora. (4) (Formerly numbered 175B.) 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.

175C. Special Topics in Contemporary Indian History. (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. P/NP or letter grading. 176A. Early History of Southeast Asia, Political 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 political and economic spheres, growth of nationalism, and process of decolonization.

176C. Philippine History. (4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Social, political, and economic history of Philippine societies from Spanish conquest through independence. Emphasis on questions of identity under colonialism, understanding Revolutions of 1896 and 1898, and politics of Philippine nationalist discourse. Readings include introduction to major issues in Philippine historiography and literature. P/NP or letter grading.

176D. Premodern Vietnamese 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 (circa 1850), 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 and domestic designations 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. Variable topics with focus on history of one or more of South-
east Asia’s nation-states: Indonesia, East Timor, Thai-
lard, Cambodia, Burma, Laos, Malaysia, Singapore, 

177B. Comparative Histories of Southeast Asia. (4) 

M182B. Between Crescent and Cross: Jewish Middle Ages. (4) (Same as Jewish Studies M182B and Religion M184A.) Lecture, three hours; discussion, one hour (when scheduled). Designed for ju-

179A. History of Medicine: Historic Roots of Hea-
ting Arts. (4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. 

179B. History of Medicine: Foundations of Modern Medicine. (4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Cul-

180A. Topics in History of Science. (4) Lecture, three 

180B. Historical Perspectives on Gender and Science. (4) (Same as Gender Studies M180B.) Lecture, 

180C. Science and Technology in 20th Century. (4) 

181A. Topics in Jewish History. (4) (Same as Jew-

181B. Topics in Jewish History. (4) (Same as Jew-

M182D. European Jewry, 1881 to Present. (4) (Same as Jewish Studies M182D.) Lecture, three 

182A. Ancient Jewish History from Patriarchs to Rab-

182A. Ancient Jewish History from Patriarchs to Rab-

182E. Medieval Period. Examination of three in-

182F. Jewish Intellectual History. (4-4) (Same as 

184A. Jewish Civilization: Encounter with Great 

184B. American Jewish Experience. (4) (Same as 

185A. Jewish Medical Society in 19th-Century Amer-

185B. Religions of South and Southeast Asia. (4) 

185C. Religions of South and Southeast Asia. (4) 

185D. History of State of Israel, 1948 to Present. (4) 

185E. Special Topics in History of Religions. (4) 

185F. Women’s Movements in the Middle East. (4) 

186A. History of Early Christians. (4) (Formerly 

186B. Religious Environment of Early Christians. 

186C. Jesus of Nazareth in Historical Research. 

187A. Women and Gender, Prehistory to 1792. (4) 

M181A. Religion of ancient Israel: varying concepts of 

myth in history of religion and culture. Examples se-
lect from nonliterate as well as from other Asian and

185B. Religions of South and SouthEast Asia. (4) 

185C. Religions of South and Southeast Asia. (4) 

185D. Religions of Ancient Near East. (4) (Same as 

185E. History of Early Christians. (4) (Formerly 

185F. Women’s Movements in the Middle East. (4) 

M184A. American Jewish Experience. (4) (Same as 

M184B. American Jewish Experience. (4) (Same as 

M184C. Religious Environment of Early Christians. (4) (Same as Religion M184B.) Lecture, three 

M184D. History of State of Israel, 1948 to Present. (4) 

M184E. Historical Perspectives on Gender and Science. (4) (Same as Gender Studies M180B.) Lecture, 

M184F. Women’s Movements in the Middle East. (4) 

M186A. History of Early Christians. (4) (Same as 


M186C. Jesus of Nazareth in Historical Research. 

M187A. Women and Gender, Prehistory to 1792. (4) 


consciousness in second half. Objects or texts cre-
ed by women examined or read throughout. P/NP or letter grading.

M187B, Global Feminism, 1850 to Present, (4) Formerly numbered M187A. (Same as Gender Studies M186B.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Introduction to movements for women’s rights (educational, political, economic, sexual, and reproductive) around world and over one and one-half centuries. P/NP or letter grading.

188. Special Courses in History. (4) Lecture, three hours. Departmentally sponsored experimental or temporary courses, such as those taught by visiting faculty members. May be repeated for credit with top-

M188SL, Applied Jewish Studies and Social Ethics. (4) Lecture. M188SL and Religion M188SL) Lecture, three hours; fieldwork, two hours. Introduction to history, theory, and practice of applied Jewish studies. Analysis of historical and contemporary texts on Jewish social ethics and justice (biblical, rabbinic, medieval, and modern) paired with service learning in Jewish social justice organizations that work with diverse populations in Los Angeles community. P/NP or letter grading.

191A-191Q, Capstone Seminars: History. (4 each) Seminar, three hours. Designed for seniors. Limited to 15 students meeting with faculty member. Organized on topics, basis with reading, discussion, and de-

M191DC, CAPP Program Seminars, (4) Lecture. CAPP Program students. Seminars for undergraduates in Center for American Politics and Public Policy’s program in Washington, DC. Focus on development and execu-
tion of original empirical research based on experiences from Washington, DC-based field placements. Study variety of qualitative methods (observation, interviewing, etc.), with comparison to quantitative analysis. Examination of features of solid and significant research; in-

M194DC, CAPP Program Seminars, (4) Lecture. Limited to CAPP Program students. Seminars for undergraduate students in Center for American Politics and Public Policy’s program in Washington, DC. Focus on development and exe-
cution of original empirical research based on experiences from Washington, DC-based field placements. Study variety of qualitative methods (observation, interviewing, etc.), with comparison to quantitative analysis. Examination of features of solid and significant research; in-

M200V, Advanced Historiography: Afro-American. (4) (Same as Afro-American Studies M200A.) Seminar, three hours. May be repeated for credit.

200A-200U, Advanced Historiography. (4) (4) Seminar, three hours. May be repeated for credit.

200A, Ancient Greece; 200B, Ancient Rome; 200C, Medieval Europe to 1500; 200D, Latin America to 1820; 200J, Near East; 200K, U.S.; 200M, Japan; 200N, Africa; 200Q, Science and Technologi-
gy; 200P, History of Religions; 200R, Theory of History; 200U, Jewish History; 200S, Armenia and Caucasus; 200T, Southeast Asia; 200V, Psychohistory.
400 / History
212. Methods in Armenian Oral History. (4) Seminar, three hours. Uses and techniques of Armenian
oral history; preinterview, interview, and postinterview
procedures; methods of compilation and evaluation.
Field assignments, interviews, and summaries and/or
paper based on interviews. S/U or letter grading.
214. Topics in World History. (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. (4-4) Seminar, three hours. Course 215A is requisite to 215B. In
Progress (215A) and letter (215B) grading.
216A-216B. Seminars: Byzantine History. (4-4)
Seminar, three hours. Course 216A is requisite to
216B. In Progress (216A) and letter (216B) grading.
217. Sources and Handbooks of Medieval History.
(4) Seminar, three hours. Preparation: reading knowledge of German or French. Introduction to types of
medieval source materials and the handbooks needed to use them.
M218. Paleography of Latin and Vernacular Manuscripts, 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 regard to their respective
presentation 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 Entering Graduate Students in
Modern European History. (4) Seminar, three hours.
Normally limited to and required of all modern European history graduate students. Introduction to topics, methods, and historiography of modern European
history.
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. Seminars: Reformation. (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 History. (4-4) (Same as Art History M241A-M241B.)
Seminar, 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 Intellectual and Cultural History. (4-4) Seminar, three hours.
Course 231A is requisite to 231B. In Progress (231A)
and letter (231B) grading.
232A-232B. Seminars: French History of 19th and
20th Centuries. (4-4) Seminar, three hours. Course
232A is requisite to 232B. In Progress (232A) and letter (232B) grading.
233A-233B. Seminars: Russian/Soviet History. (44) Seminar, three hours. Course 233A is requisite to
233B. In Progress (233A) and letter (233B) grading.
234A-234B. Seminars: Modern History of Spain,
Portugal, and Italy. (4-4) Seminar,
three
hours.
Course 234A is requisite to 234B. In Progress (234A)
and letter (234B) grading.
235A-235B. Economic History of Europe, 1780 to
1939. (4-4) Seminar, three hours. Course 235A is requisite to 235B. Analysis of internationalization of European world economy, emergence of Western core
and its relation with European peripheries. Compara-

tive analysis on different regions, stressing main characteristics of postwar European economy. In Progress
(235A) and letter (235B) grading.
235C-235D. Economic History of 20th-Century Europe. (4-4) Seminar, three hours. Course 235C is requisite to 235D. Cyclical trend, various economic regimes, and integration process of Europe. In Progress
(235C) and letter (235D) grading.
M236A. Proseminar: Political Psychology. (4)
(Same as Political Science M261A and Psychology
M228A.) Seminar, three hours. Introduction to political
psychology: psychobiography, personality and politics, mass attitudes, group conflict, political communication, and elite decision making.
236B-236C. Seminars: Psychohistory. (4-4) Seminar, three hours. Course 236B is requisite to 236C.
Exploration of individual and group psychological
processes and their uses in historical research. In
Progress (236B) and letter (236C) grading.
239A-239B. Seminars: English History — Middle
Ages. (4-4) Seminar, three hours. Course 239A is requisite to 239B. In Progress (239A) and letter (239B)
grading.
240A-240B. Seminars: English History — Modern
History. (4-4) Seminar, three hours. Course 240A is
requisite to 240B. In Progress (240A) and letter (240B)
grading.
241A-241B. Seminars: German History. (4-4) Seminar, three hours. Course 241A is requisite to 241B.
Designed for graduate students. In Progress (241A)
and letter (241B) grading.
242. Colloquium: European History. (2) Designed
for graduate students. Forum for critical discussion of
work of students and invited scholars. Presentation of
student dissertation prospectuses during their third or
fourth year in residence. S/U grading for students presenting papers.
244A-244B. Seminars: British Empire History. (4-4)
Seminar, three hours. Course 244A is requisite to
244B. In Progress (244A) and letter (244B) grading.
245. Colloquium: U.S. History. (4) Seminar,
three
hours. Normally limited to and required of all entering
graduate students in U.S. history. Critical introduction
to historical method, with emphasis on new methodological and conceptual approaches, use of source
materials, and current state of U.S. historiography.
246A-246B-246C. Introduction to U.S. History. (44-4) Seminar, three hours. Graduate survey of significant literature dealing with U.S. history from the Colonial period to the present. Each course may be taken
independently for credit. 246A. Colonial Period; 246B.
1790 to 1900; 246C. 20th Century.
247A-247B. Seminars: Early American History. (44) Seminar, three hours. Course 247A is requisite to
247B. In Progress (247A) and letter (247B) grading.
249A-249B. Seminars: Jacksonian America. (4-4)
Seminar, three hours. Course 249A is requisite to
249B. In Progress (249A) and letter (249B) grading.
250A-250B. Seminars: U.S. History of Middle 19th
Century. (4-4) Seminar, three hours. Course 250A is
requisite to 250B. In Progress (250A) and letter (250B)
grading.
251A-251B. Collaborative Research Seminars:
American History. (4-4) Seminar, three hours. Research seminars taught jointly by two faculty members. In Progress (251A) and letter (251B) grading.
251A. Common readings and development of individual research projects. 251B. Requisite: course 251A.
Research, writing, and critical discussion of draft papers.
252A-252B. Seminars: Recent U.S. History to 1930.
(4-4) Seminar, three hours. Course 252A is requisite
to 252B. In Progress (252A) and letter (252B) grading.
253A-253B. Seminars: Recent U.S. History since
1930. (4-4) Seminar, three hours. Course 253A is requisite to 253B. In Progress (253A) and letter (253B)
grading.
254A-254B. Seminars: U.S. Social and/or Intellectual History. (4-4) Seminar, three hours. Course 254A
is requisite to 254B. In Progress (254A) and letter
(254B) grading.

255A-255B. Business Enterprise and American
Culture. (4-4) Seminar, three hours. Course 255A is
requisite to 255B. In Progress (255A) and letter (255B)
grading.
256A-256B. Seminars: America in World. (4-4)
Seminar, three hours. Course 256A is requisite to
256B. In Progress (256A) and letter (256B) grading.
257A-257B. Seminars: U.S. Urban History. (4-4)
Seminar, three hours. Course 257A is requisite to
257B. In Progress (257A) and letter (257B) grading.
258A-258B. Seminars: Working Class History. (44) Seminar, three hours. Course 258A is requisite to
258B. In Progress (258A) and letter (258B) grading.
M259A-M259B. History of Women. (4-4) (Same as
Gender Studies M259A-M259B.) Seminar, three
hours. 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.
260A-260B. Seminars: Native American History. (44) Seminar, three hours. Course 260A is requisite to
260B. In Progress (260A) and letter (260B) grading.
M260C. Native American Revitalization Movements. (4) (Same as Anthropology M238.) Lecture,
two hours; discussion, one hour. Examination of revitalization movements among native peoples of North
America (north of Mexico). Specific revitalization includes Handsome Lake, 1870 and 1890 Ghost Dances, and Peyote Religion. Letter grading.
M260D. Native American Historical Demography.
(4) (Same as Anthropology M287Q.) Lecture, two
hours; discussion, one hour. Examination of population history of Native Americans north of Mexico prior
to and following contacts 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.
261A-261B. Seminars: Afro-American History. (44) Seminar, three hours. Course 261A is requisite to
261B. Social and political history of the Afro-American, including emphasis on development and structure of race relations in America; racial concepts and
dilemmas, black and white. In Progress (261A) and
letter (261B) grading.
262A-262B. Seminars: Chicano History. (4-4) Seminar, three hours. Course 262A is requisite to 262B. In
Progress (262A) and letter (262B) grading.
(4-4) Seminar, three hours. Course 263A is requisite
to 263B. In Progress (263A) and letter (263B) grading.
M264. History of American Education. (4) (Same as
Education M201C.) Discussion, three hours. History
of educational thought and of social forces impinging
on American education from 1880s to present. Analysis of relation between these ideas and forces, and
aims and practices of American education today. S/U
or letter grading.
M265. Latin American Research Resources. (4)
(Same as Information Studies M225 and Latin American Studies M200.) 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.
266A-266B. Seminars: Colonial Latin American
History. (4-4) Seminar, three hours. Course 266A is
requisite to 266B. In Progress (266A) and letter (266B)
grading.
M266C. Analyzing Historical Texts. (4) (Same
as
Linguistics M238.) Seminar, four hours. Designed for
graduate students. Analysis of linguistic structure and
ethnohistorical context of legal and other documents
written by native-speaking scribes and translators.
Topics include paleographic technique and text analysis software. May be repeated for credit. S/U grading.
267A-267B. Seminars: Latin American History,
19th and 20th Centuries. (4-4) Seminar, three hours.
Course 267A is requisite to 267B. In Progress (267A)
and letter (267B) grading.


M268A-M268B. Seminars: Recent Latin American History. (4-4) (Same as Latin American Studies M268A-M268B.) Seminar, three hours. Course M268A is requisite to M268B. Reading knowledge of Spanish and Portuguese normally required. Seminar devoted to selected topics of interdisciplinary nature. In Progress (M268A) and letter (M268B) grading.

M275A-275B-275C. Colloquia: African History. (4-4-4) Seminar, three hours. Designed for all entering and continuing graduate students in African history. Source identification, research methodologies, historiographical traditions, historical interpretation, approaches to teaching, and research design. Forum for critical discussion of dissertation prospectuses and work in progress. Each course may be taken independently for credit. S/U or letter grading.

M276A-276B. Seminars: African History. (4-4) Seminar, three hours. Course 276A is requisite to 276B. Topics in African history, with focus on producing papers of publishable quality. In Progress (276A) and letter (276B) grading.

M280. China Studies: Discipline, Methods, Debates. (2) (Same as Chinese M202.) Seminar, two hours. Introduction to study of China as practiced in humanities and social sciences disciplines. S/U grading.


M282A-282B. Seminars: Chinese History. (4-4) Seminar, three hours. Course 282A is requisite to 282B. In Progress (282A) and letter (282B) grading.

M285A-285B. Seminars: Japanese History. (4-4) Seminar, three hours. Course 285A is requisite to 285B. In Progress (285A) and letter (285B) grading.

M286. Japan in Age of Empire. (4) (Same as Anthropology M286A and M286B.) 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 hardy explored area of study of colonialism. S/U or letter grading.

M287. Central Asian Studies: Discipline, Methods, Debates. (2) (Same as Anthropology M287R.) Seminar, three hours. Introduction to study of Central Asia as practiced in humanities and social sciences disciplines. S/U grading.

M288A-288B. Seminars: South Asia. (4-4) Seminar, three hours. Course 288A is requisite to 288B. In Progress (288A) and letter (288B) grading.

M289A-289B. Seminars: Southeast Asia. (4-4) Seminar, three hours. Course 289A is requisite to 289B. In Progress (289A) and letter (289B) grading.

M291A-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.

M293A-293B. Seminars: History of Religions. (4-4) Seminar, three hours. Course 293A is requisite to 293B. In Progress (293A) and letter (293B) grading.

M294A-294B. Western Science, Religion, and Political Economy, 1600 to 1830. (4-4) Seminar, three hours. Study of science integrated within matrix of religious belief commonplace in early modern Europe and, to a lesser extent, in American colonies. Examination of relationship of both cultural matrices to political and economic change. S/U or letter grading.

M295. 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 discussions of such authors as Popper, Kuhn, Toulmin, Lakatos, Holton, Buhdahl, Feyerabend, and others.

M296. History of Statistics. (4) (Same as Statistics M245.) Seminar, three hours. History of statistics ranging over diverse territory. Development of mathematical methods; philosophical, political, and social issues that were linked to their emergence and use. S/U or letter grading.

M297A-297B. Seminars: History of Science. (4-4) Seminar, three hours. Course 297A is requisite to 297B. In Progress (297A) and letter (297B) grading.

M298. Interdisciplinary Studies in 17th and 18th Centuries. (4) (Same as English M298.) Discussion, four hours. Topics vary according to participating faculty. May be repeated for credit. S/U or letter grading.

M299. Interdisciplinary American Studies. (6) (Same as English M299.) Discussion, four hours. Readings, discussion, and papers on common theme, 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.


501. Cooperative Program. (2 to 8) Preparation: consent of UCLA graduate adviser and graduate dean. To be arranged. May be repeated for credit with consent of graduate faculty. May be repeated for credit with consent of graduate studies committee. S/U grading.


Honors Collegium

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Honors College of Letters and Science

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Christine A. Dunkel Schetter, Ph.D., Chair

Faculty Committee

Esteban C. Dell’Angela, Ph.D. (Human Genetics)
Christine A. Dunkel Schetter, Ph.D. (Psychology)

Erikki I. Huhtamo, Licenciate in Philosophy (Design | Media Arts)
Daniel H. Lowenstein, LL.B. (Law)
Jeffrey H. Miller, Ph.D. (Microbiology, Immunology, and Molecular Genetics)
Teófilo F. Ruiz, Ph.D. (History, Spanish and Portuguese)
Shelley I. Salamensky, Ph.D. (Theater)

Scope and Objectives

The Honors Collegium is a series of courses with an interdisciplinary emphasis designed for students enrolled in College Honors. The college encourages animated discussion among students, as well as between students and professors. It seeks to promote scholarly exchange across the major disciplines in the University. And it offers small classes and individual attention.

Undergraduate Study

Each Honors Collegium course is staffed by a director who is distinguished in teaching and scholarship and may include a variable number of guest lecturers and additional specialists in their fields. Some courses satisfy general education requirements and serve as preparation for numerous majors in the College of Letters and Science. Counselors are available in the Honors Programs Office, A311 Murphy Hall, to advise and help students plan an integrated academic program.

Courses in the Honors Collegium are mainly interdisciplinary seminars, and the courses vary each year. Refer to the Schedule of Classes for current course listings. An Honors Collegium quarterly brochure, that gives detailed course descriptions of current offerings, is available at http://www.honors.ucla.edu/hchome.html.

Honors Collegium

Lower Division Courses

1. Plague Culture. (5) Seminar, three hours. Study of episodes and metaphors of plague in Western culture from ancients into age of AIDS. Topics include scripture, ancient tragedy, Black Death, realist novel, aesthetic metaphors of plague, Nazi propaganda, existential and absurdist thought, postwar cinema, contemporary American theater, and modern science and medicine. P/NP or letter grading.

2. Comparative Genocide. (4) Lecture, four hours; discussion, one hour. Social comparative study of genocide, combining theoretical concepts with case studies (such as Armenia, the Holocaust, American Indians, Uganda under Amin and Obote, etc.). P/NP or letter grading.

3. Personal Brain Management. (5) Seminar, four hours. Designed for College Honors students. Available psychotherapies, educational media, and drugs can alter our way of thinking. New wave of information technologies and biotechnologies is changing existing landscape. Survey of available tools that claim neuroplastic brain-changing effects, consideration of future developments, and engagement of students in discussion on ethical and philosophical implications of these developments. P/NP or letter grading.

4. Immigrants and American Dream. (5) Seminar, three hours. Study of process of attaining American dream 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.

5. Representing Cleopatra: History, Drama, and Film. (5) Seminar, three hours. Examination of legendary figures and their various aspects of voice production. Study of students’ own vocal productions as well as selected contemporary issues such as genetic engineering and war against infectious diseases. P/NP or letter grading.

6. Energy Issues: Before and Now. (5) Seminar, three hours. Review of physics and chemistry of concepts of energy, history over ages of turning of discoveries into products in this area, including use of fossil fuel, climate change, and possible alternative energies. P/NP or letter grading.

7. Saint and Heretic: Joan of Arc and Gilles de Rais, History and Myth. (5) Seminar, three hours. Examination of both history of Joan of Arc and Gilles de Rais and of ways in which, over time, their histories became legends, driven by various agendas including national identity, Beatification, and gender politics. P/NP or letter grading.

8. Visual Communication and Scientific Principles. (5) Seminar, three hours. Opportunity for collaboration between those in science-related disciplines and those in art/humanities-related disciplines. New ways in which science can be visually communicated, using tools such as graphic novels and digital typography, outside science education. Science students learn innovative ways of presenting scientific data and design and art students learn how to apply their skills to topics they might not usually address. P/NP or letter grading.


11W. Postmodern Culture. (5) Seminar, four hours. Enforced requisite: English Composition 3 or 3H or English as a Second Language 36. Exploration of theories and art (literature, music, film, fine art) that emerged after World War II in what has come to be known as postmodern era. Art criticizes master narratives of earlier age and fosters fragmentation, skepticism toward universal truth, commodification of concepts of energy, history over ages of turning of discoveries into products in this area, including use of fossil fuel, climate change, and possible alternative energies. P/NP or letter grading.

12. Sacred Form: Literature and Poetry in India: Ancient 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, and new ways to think about roles of law. P/NP or letter grading.

14. Interaction of Science and Society. (5) Seminar, three hours. Examination of interaction of science and society and effects of this interaction on history, development of societies, evolution of revolutionary ideas as modeled in Galileo, Darwin, and others, and selected contemporary issues such as genetic engineering and war against infectious diseases. P/NP or letter grading.

15. Acting Myth. (4) Seminar, three hours. Interdisciplinary approach to literature and acting through study of texts and mythologies from variety of Indo-European and Near Eastern sources; students learn acting techniques in directed scenes from the texts. P/NP or letter grading.

16. Science of Singing Voice. (5) Seminar, three hours. Study of methods, including computer laboratory work, of analyzing and synthesizing aspects of voice production. Study of students’ own vocal productions as well as recorded samples of famous singers. P/NP or letter grading.

17. Art, Entertainment, and Social Change. (5) Seminar, three hours. Designed for College Honors students. Integrative examination of evolving impact of arts and entertainment industry on such various aspects of social change as environmental movements, politics and elections, economy, local politics, and community relations. Satisfies Writing II requirement. 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) Seminar, three hours; discussion, one hour. Exploration of difference between science and other systems of knowledge; study of history and philosophy of science and examination of its reliability as objective knowledge. Enforced requisite: English Composition 3 or 3H or English as a Second Language 36. P/NP or letter grading.

21W. Rise and Fall of Modernism. (6) Seminar, three hours; writing laboratory, two hours. Enforced requisite: English Composition 3 or 3H or English as a Second Language 36. Study of early and middle 20th-century attempts to construct significance in a general cultural and philosophical dislocation of dislocations of modernism. P/NP or letter grading.

22. Comparative Odysseys. (5) Seminar, three hours. Designed for College Honors students. Greek and Chinese classics have in common two modes of heroism: one glorifying prowess and another celebrating the ascetic, associated primarily with men motivated by piety and honor. Introduction of these traditional constructions of heroic, particularly conflation of courage and violence. Reading includes Homer’s Iliad and Odyssey, Ogygia by Homer, Journey to West by Anthony Yu, Tripmaster Monkey by Maxine Kingston, and Ignorance by Milan Kundera. P/NP or letter grading.

23. Political Dissidence Today and in Ancient Greece: Trial and Death of Socrates in Its Classical and 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, and new ways to think about roles of law. P/NP or letter grading.

24. Three African Civilizations. (5) Seminar, four hours; film viewing, two hours. Study of development of three major African civilizations through their arts, with focus on arts of Mali, Ethiopia, and Kongo from about 100 B.C.E. to present. P/NP or letter grading.

26. Representing Medicine: Art, Literature, and Film. (5) Seminar, four hours. Limited to Freshman Summer Program students. Exploration of interdisciplinary dimensions of medical humanities, with emphasis on cross-cultural 20th-century portraits of profession, including representations of doctor/patient relations, healthcare sites and circumstances, aging, alternative treatments, and mental health. Offered in summer only. P/NP or letter grading.

27. Theories of Exchange: Social Life of Gifts and Commodities. (4) Seminar, three hours. Study of how creation, maintenance, and dissolution of social and political relations are modulated through exchange of gifts and/or commodities in different contexts and different cultures. P/NP or letter grading.


31. Numbers: Their Meaning and Psychology. (5) Seminar, three hours. Designed for College Honors students. Interplay between linguistics and psychology, particularly conflation of courage and violence. Reading includes Homer’s Iliad and Odyssey, Ogygia by Homer, Journey to West by Anthony Yu, Tripmaster Monkey by Maxine Kingston, and Ignorance by Milan Kundera. P/NP or letter grading.

34W. Construction and Migration of Knowledge: Rhetoric and Media for Information Age. (6) Seminar, three hours. Designed for College Honors students. Examination of ways in which numbers are interpreted, and numerical knowledge travels to nonspecialist readers; latter explains how epheboreal information becomes institutionalized. Satisfies Writing II requirement. Letter grading.

35. Scientific Method: Critical Inquiry into Question of Extraterrestrial Life. (4) Lecture, three hours; discussion, one hour. Course does not presume to answer question of whether there is intelligent life in the universe but rather uses this question as a pedagogic tool to introduce central ideas, techniques, and limitations of the scientific method — what questions would need to be asked, what scientific knowledge would be needed, and what obstacles would have to be overcome just to address this question. P/NP or letter grading.

36. Global Geographies and Idea of Home. (5) Seminar, three hours. Designed for College Honors students. Home is potent symbolic notion across eras and cultures, locale from which we depart and to which we may return. Broader notions of home, as increasingly necessary for basic social bonds between people and nations. Investigation of what home is through challenging works of theory surrounding notions of space, place, longing, belonging, exile, and return, and through lighter, vibrant works of literature, film, and performance. P/NP or letter grading.

40W. Transformations of Cultural Stories across Disciplines and Texts. (5) Seminar, four hours. Enforced requisite: English Composition 3 or 3H or English as a Second Language 36. Tracing of writing and rewriting of traditional story types, specifically the adventures as proxy representation of the odyssey of Robinson Crusoe and its remanifestations in Coetzee’s Foe and the fairy tale as represented by Cinderella and its various cross-cultural remanifestations. Satisfies Writing II requirement. Letter grading.

41. Understanding Ecology: Finding Interdisciplinary Solutions to Environmental Problems. (5) Seminar, four hours. Designed for College Honors students. Exploration of ecological basis of planet’s most immediate environmental issues. How do we and our technology fit into the larger ecosystems? What is the role of a human in the “global village”? Science writing, particularly scientific texts, both contemporary and historical, that have been used to communicate science to and influence large groups of people’s beliefs and behavior. What is it about certain scientific texts that change way we think and have potential to affect social policy? Texts cover variety of topics from evolution to nutrition and food intake. How different debates about climate change? Stu- dents encouraged to practice science writing themselves. Satisfies Writing II requirement. Letter grading.

44. Society of Excess: On Waste, Consumer Culture, and Environment. (6) Seminar, four hours. Enforced requisite: English Composition 3 or 3H or English as a Second Language 36. Science writing, particularly scientific texts, both contemporary and historical, that have been used to communicate science to and influence large groups of people’s beliefs and behavior. What is it about certain scientific texts that change way we think and have potential to affect social policy? Texts cover variety of topics from evolution to nutrition and food intake. How different debates about climate change? Stu- dents encouraged to practice science writing themselves. Satisfies Writing II requirement. Letter grading.

45W. Writing about Life Sciences. (5) Seminar, three hours; discussion, one hour. Enforced requisite: English Composition 3 or 3H or English as a Second Language 36, Life Sciences 2 (may be taken concur-
46. Drugs in Society: Interdisciplinary Perspective on Drug Use, Abuse, Treatment, and Intervention. (5) Seminar, three hours. Examination of complex relations between individual, local, and global interests as they shape and reflect reproductive practices, public policy, and exercise of power. P/NP or letter grading.

47. Politics of Reproduction. (4) Seminar, three hours. Examination of complex relations between individual, local, and global interests as they shape and reflect reproductive practices, public policy, and exercise of power. P/NP or letter grading.

48. Evidence in Law, Science, History, and Journalism. (4) Seminar, four hours. Rigorous study of ways in which lawyers, scientists, historians, and journalists handle evidence, with aim of advancing cross-disciplinary inquiry to produce a common vocabulary and set of concepts that allow for discussion of evidentiary issues in differing fields of inquiry. P/NP or letter grading.

50W. Writing Science. (5) Seminar, four hours. Enforced requisite: English Composition 3 or 3H or Definitive Evidence of Mathematical Knowledge required. Examination of complex relations between individual, local, and global interests as they shape and reflect reproductive practices, public policy, and exercise of power. P/NP or letter grading.

51. Music and Society. (5) Seminar, four hours. Enforced requisite: English Composition 3 or 3H or Definitive Evidence of Mathematical Knowledge required. Examination of complex relations between individual, local, and global interests as they shape and reflect reproductive practices, public policy, and exercise of power. P/NP or letter grading.

52. Culture and History of Utopias. (4) Seminar, three hours. Study of major utopian writings from Thomas More's classical text to recent ecological and feminist utopian texts, with purpose of uncovering social, intellectual, and cultural landscapes underlying quest for a more perfect society. P/NP or letter grading.

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 categories (race, ethnicity, nation, and generation). P/NP or letter grading.

55. Politics of Reproduction. (4) Seminar, three hours. Examination of complex relations between individual, local, and global interests as they shape and reflect reproductive practices, public policy, and exercise of power. P/NP or letter grading.

57. Language, Performance, and Culture. (5) Lecture, three hours. Mixuture of lecture and discussion on topic of language and its relationship to performance and culture in 19th and 20th centuries. Study of theorists such as Saussure, Wittgenstein, Stanley Cavell, Judith Butler, and others, playwrights such as Wilde, Stein, and Samuel Beckett, and films such as “His Girl Friday” and “Monky 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. Literature and Culture of the American South. (6) Seminar, four hours; writing laboratory, two hours. Enforced requisite: English Composition 3 or 3H or Definitive Evidence of Mathematical Knowledge required. Examination of complex relations between individual, local, and global interests as they shape and reflect reproductive practices, public policy, and exercise of power. P/NP or letter grading.

60. Community and Self-Interest in History of American Culture. (6) Seminar, three hours. Exploration of history through frequently contradicting 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.


62. Community and Labor Development from Ground Up. (4) Lecture, three hours; discussion, one hour. Study of cross-disciplinary, cross-cultural development and outreach efforts in Los Angeles area, with projects from Community Outreach Partnership Center within School of Public Policy and Social Research. P/NP or letter grading.

63. Politics and Rhetoric of Literature. (6) Seminar, four hours; writing laboratory, two hours. Enforced requisite: English Composition 3 or 3H or English as a Second Language 36. Examination of relational perspectives on how people are distressed by intense fear. P/NP or letter grading.


70A. Genetic Engineering in Medicine, Agriculture, and Law. (5) Lecture, three hours; discussion, two hours. Open not to students with credit for Life Sciences 3, 4, Microbiology 7, or Molecular, Cell, and Developmental Biology 70. Historical and scientific study of genetic engineering in medicine, agriculture, and law, including examination of social, ethical, and legal issues raised by new technology. P/NP or letter grading.

70AL. Gene Discovery Laboratory. (5) Seminar, three hours; laboratory, five hours. Recommended prerequisite: course 70A. Laboratory experience in genomics and seminar and discussion that apply experimentally and concepts techniques taught in course 70A, 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 evolution of the universe. P/NP or letter grading.

77. Greeks and Persians: Ancient Encounters from Herodotus to Alexander. (5) Seminar, three hours. Designed for College Honors students. Examination of multiple encounters between Greeks and Persians in antiquity, from origins of Achaemenid Empire through its conflicts with Greek world of Mediterranean, to Alexander’s defeat of Darius III. Consideration of multiple constructions of other in antiquity. Near Eastern versus Greek testimonia, and art and archeological evidence of these two civilizations. P/NP or letter grading.


81. Eastern Christianity in Comparative Perspective. (5) Seminar, two hours. Introduction to potentially conflict-ridden area of drug use, abuse, treatment, and intervention. P/NP or letter grading.

82. Community and Labor Development from Ground Up. (4) Lecture, three hours; discussion, one hour. Study of cross-disciplinary, cross-cultural development and outreach efforts in Los Angeles area, with projects from Community Outreach Partnership Center within School of Public Policy and Social Research. P/NP or letter grading.

101A. Student Research Forum. (2) Lecture, one hour; workshop, two hours. Corequisite: course 99. Designed to promote broad and deep understanding of university research, including plenary lectures on research and workshops on grant writing, Internet searches, research abstracts, and laws and regulations governing research. P/NP grading.

101B. UCLA Undergraduate Science Journal. (2) Seminar, two hours. For students on editorial board of annual Westwind journal of undergraduate research and writing, including introduction to writing in the sciences and honing of editing and production skills. May be repeated once for credit. P/NP grading.

101C. UCLA Undergraduate Journal for Humanities and Social Sciences. (2) Seminar, two hours. For students on editorial board of annual UCLA Undergraduate Science Journal, including study of writing in the sciences and honing of editing and production skills. May be repeated once for credit. P/NP grading.

101D. Counseling Multicultural Communities. (2) Seminar, two hours. Study of issues of culture and identity in cross-cultural counseling, including development of working model. P/NP grading.

101E. Leading Undergraduate Seminars. (1) Seminar, one hour. Limited to students who have been accepted into Undergraduate Student Initiated Education (USIE) program. Learning and exploration of issues that are integral to developing seminars and development of skills to become effective student facilitators. Practical teaching strategies and techniques, as well as pedagogical, organizational, and technological issues confronted by new instructors. Discussion of key topics, followed by discussion of syllabi that students are developing for their seminars and conducting of micro-teaching presentations. Guest speakers expand on topics that arise from class discussions. May be repeated once for credit. P/NP grading.

101F. Integrity in Research. (2) Seminar, two hours. Limited to students in CARE, HHMI, MARC, and UC Leads programs. Discussion about integrity in research, current thinking in field, and important ethical issues that impact scientific investigation. P/NP grading.

101G. Graduate School Preparation. (2) Seminar, two hours. Limited to AAP students. Designed to help AAP students familiarize themselves with academic discipline they would like to pursue in graduate school. Through course readings, guest speakers,
114. 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 through local and international influences. Examinations of trends that enable ordinary men and women to oppose their oppressors. Examination of this premise through acts of resistance to Nazi occupation in Europe. P/NP or letter grading.

115. Poetry and Society in England, 1588 to 1688: Verse, Politics, Religion, and Sexuality from Spanish Armada to Glorious Revolution. (5) Seminar, three hours. Designed for College Honors students. Poetry of England in century between 1588 and 1688 through prism of evolving political, philosophical, social, economic, and scientific influences of that day and vice versa to understand poetry in cultural and historical context. Students research widely on range of subjects from alchemy to zoology and become capable readers of relevant topic such as Renaissance medicine, Calvinism, Scholasticism, Cromwell and New Model Army, Elizabethan foreign policy, Stuart architecture, agricultural and dietary changes, and printing and publishing conventions. P/NP or letter grading.

116. Art Alive: Art and Improvisation in Museums. (4) (Same as Theater M187.) Seminar, four hours. Offered in collaboration with Los Angeles County Museum of Art (LACMA). Lecture and seminars by prominent artists and curators examine the possibilities of art in collection through acting, dialogues, movement, and music. Research into history and art history and production of creative performance piece required. P/NP or letter grading.

117. Resistance to Evil: Organized Resistance to Nazis in Occupied Europe. (4) Seminar, three hours. Resistance is not a moral or philosophical issue, but a sociocultural one. To examine whether resistance possible are specific historical circumstances and social relations that enable ordinary men and women to oppose their oppressors. Examination of this premise through acts of organized resistance to Nazi occupation in Europe. P/NP or letter grading.


119. Nuclear Weapons: Critical Decisions. (4) (Same as Environment M165, Public Policy M116, and Political Science M139B.) 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.

120. Art and Performance: Interdisciplinary Approach to Collections of Getty Center. (4) (Same as Theater M108.) Lecture, four 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 philosophies of objects are examined in musical and dramatic performance. Letter grading.

121. Psychoanalysis before Freud, and a Little After. (5) Lecture, three hours; discussion, one hour. Examination of different ways human beings have developed conceptions of themselves through history from early civilizations through Middle Ages, Renaissance, Reformation, scientific revolution, Enlightenment, origins of modern world, Freud's Fin de siècle Vienna, and post-Freudian Vienna; investigation of interactions of these different conceptions in present day. P/NP or letter grading.

122. Violence Against Women in Cross-Cultural Perspectives. (4) Seminar, three hours. Exploration of issue 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 transnational conflict; history of ethnic antagonism, competition for control of natural resources, and hostilities precipitated by militarism. P/NP or letter grading.

124. Midwives, 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 childbirth over time and across cultures, addressing such themes as shifting relations among birthing women, midwives, and medical men and cultural meanings of birth. P/NP or letter grading.

125. Communities and Nations in Conflict: Theory and Practice of International Conflict Resolution. (5) Lecture, three hours. Introduction to theory and practice of conflict resolution, with emphasis on international conflict. Transitional justice and how to form international criminal tribunals, special courts, and International Criminal Court to indigenous approaches such as community justice systems. Examination of environmental conflict resolution, homeland security and terrorism, role of gender in conflict, and role of media in conflict. P/NP or letter grading.

127. Citizenship, Leadership, and Service. (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.

M128L. Latinos, Linguistics, and Literacy. (5) (Same as Applied Linguistics M125L, Chicana and Chicano Studies M170SL, and Spanish M172SL.) Seminar, four hours; field project, four to six hours. Recommended requisite: Spanish 100A. In-depth study of various topics related to literacy, including different definitions of literacy, programs for adult preliterate and literate and gender, approaches to literacy (whole language, phonics, Freire's liberation pedagogy), history of writing systems, gender and literacy, and alphabetic script, and gender and literacy. Required field project involving Spanish-speaking adults in adult literacy programs. P/NP or letter grading.


133. Practice and Ethics of Ethnographic Fieldwork. (5) Seminar, three hours. Examination of ethics and practices of ethnographic fieldwork. This is not field methods course but one intended to convey rich knowledge of fieldwork can produce in many disciplines and kinds of ethical issues raised in doing fieldwork. P/NP or letter grading.

M135. Narrative in Mass Communication. (6) (Same as Communication Studies M135.) Seminar, four hours. Examination of narrative as an organizing and funtion of mass media, beginning with social, psychological, cultural, and rhetorical functions of storytelling and basic elements of narrative, then applying these to study of television, film, 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 varieties of genres, including review of sociopolitical conditions that act to foster or constrain satire. P/NP or letter grading.
ophers, anthropologists, psychologists, and biologists have thought about human nature to look for ethical guidance about what genetic and neurobiological technologies to pursue or avoid. P/NP or letter grading.

184. Indian and Pakistan: Historic Roots of Conflict and Prospects for Cooperation. (5) Seminar, three hours. Designed for College Honors students. History of India and Pakistan from demise of British India's Empire in mid-August 1947, with inept partition of Punjab and Bengal and bifurcated Pakistan, to current state of both nations and their potential for conflict and cooperation. P/NP or letter grading.

193A. Journal Club Seminars: McNair Research Scholars. (2) Seminar, two hours; discussion, two hours. Limited to McNair research scholars. 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 students selected for Humanities Summer Research Program. Study humanities research journals and monographs. Weekly student research reports and presentations by humanities faculty members. May be repeated for credit. P/NP grading.

193C. Journal Club Seminars: Mellon Mays Undergraduate Research Scholars. (2) Seminar, one hour; discussion, one hour. Limited to Mellon Mays undergraduate fellows. Study of key research journals and important research articles in arts, humanities, and social sciences. Weekly research reports and presentations by Mellon Mays students. Presentations by program faculty members and other leading researchers. P/NP grading.

199. Directed Honors Studies. (4) Tutorial, two hours. Preparation: minimum of 4 units completed in Honors Collegium with grade of B or better, overall 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.

HUMAN GENETICS

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Esteban C. Dell'Angelica, Ph.D.
Guoping Fan, Ph.D.
Richard A. Gatti, M.D., in Residence (Rebecca Smith Professor of A-T Research)
Daniel H. Geschwind, M.D., Ph.D., in Residence (Gordon and Virginia MacDonald Distinguished Professor of Human Genetics)
Michael B. Gorin, M.D., Ph.D. (Harold and Pauline Price Professor of Ophthalmology)
Wayne W. Grody, M.D., Ph.D.
Deborah Krakow, M.D., in Residence
Stefan Horvath, Ph.D.
James A. Luke, Ph.D.

Kenneth L. Lange, Ph.D. (Maxine and Eugene Rosenfield Endowed Professor of Computational Genetics)
Aldons J. Lusis, Ph.D.
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.
Jerome I. Rotter, M.D., Ph.D., in Residence
Janet S. Sinshheimer, Ph.D.
Eric M. Sobel, Ph.D., in Residence
Marc A. Suchard, M.D., Ph.D.
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Stephen G. Young, M.D.

Professor Emeritus
Stephen D. Cederbaum, M.D.

Associate Professors
Katrina M. Dipple, M.D., Ph.D.
Eleazar Eskin, Ph.D.

Assistant Professor
Julian A. Martinez, Ph.D.

Adjunct Associate Professors
Roel Ophoff, Ph.D.
Jeanette C. Papp, Ph.D.

Scope and Objectives
The goal of the graduate program is to train the next generation of leaders in human genetics. This broad and rapidly evolving field of research incorporates multiple areas of modern experimental biology (including but not limited to molecular and behavioral genetics, epigenetics, biochemistry, and developmental biology, imaging, and large-scale omics approaches such as genomics, transcriptomics, and functional genomics) and of computational biology (including bioinformatics and biostatistics). In their research, students tackle Mendelian diseases and genetically complex traits of key relevance to human health.

A wide variety of courses is offered to equip future independent researchers with fundamental knowledge about state-of-the-art methods for generating experimental data on a genome-wide scale and computational and statistical approaches to draw from the data sound conclusions of biological and medical significance. In addition, courses on medical and ethical issues provide students with a societal perspective on human genetics.

Graduate study leading to a Ph.D. degree is emphasized. Under special circumstances, and only after consultation and approval by the Human Genetics Department, individuals may apply for direct admission to the M.S. or Ph.D. program.

Graduate Study
Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website, http://grad.ucla.edu/gasaa/library/pgmqrintr.o.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. Prerequisites: Life Sciences 4, Microbiology CM156. Emphasis on use of mouse as a model system to study 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 and modeling human genetic disorders. Reading materials include original papers and reviews. Concurrently scheduled with course CM222. P/NP or letter grading.

CM124. Computational Genetics. (4) Same as Computer Science CM124. Lecture, four hours; discussion, two hours; outside study, six hours. Prerequisites: Computer Science 32 or Program in Computing 10C with grade of C- or better, and Biostatistics 100A or 110A or Mathematics 170A or Statistics 100A. Designed for engineering students as well as students from biological sciences and medical school. Introduces to computational analysis of genetic variation and computational interdisciplinary research in genetics. Topics include introduction to genetics, identification of genes involved in disease, inferring human population history, technology of genotyping, genetic information, and genetic sequencing. Focus on formulating interdisciplinary problems as computational problems and then solving those problems using computational techniques from statistics and computer science. Concurrently scheduled with course CM224. Letter grading.

CM136C. Societal and Medical Issues in Human Genetics. (5) Same as Society and Genetics M102. Lecture, three hours; discussion, two hours. Sequence of entire human genome is now known. Consideration of how this knowledge impacts concepts of ourselves as individuals and of our place in biological universe, concepts of race/ethnicity and gender, ability of DNA-based forensics to identify specific individuals, ownership and commodification of genes, issues of privacy and confidentiality, issues of genetic discrimination, issues of predictive genetic testing. Discussion of human cloning for reproductive and therapeutic purposes. Exposure to medical genetics cases. Discussion of role of whole genome sequencing in clinical setting. Human Genome Project influences on medicine and on our concepts of self and identity. Concurrently scheduled with course C236C. Letter grading.

C144. Genomic Technology. (4) Lecture; three hours; discussion, one hour. Prerequisites: Life Sciences 4. Survey of key technologies that have led to successful application of genomics to biology, with focus on the underlying specific genome-wide technologies and their current applications. Concurrently scheduled with course C244. P/NP or letter grading.

199. Special Studies in Human Genetics. (2 to 8) Tutorial, to be arranged. Students select instructor among eligible research faculty and carry out independent research project under instructor supervision. P/NP or letter grading.

Graduate Courses

M203. Stochastic Models in Biology. (4) Same as Biomathematics M203. Lecture, four hours. Prerequisites: Mathematics 170A or equivalent experience in probability. Mathematical description of biological relationships, with particular attention to areas where conditions for both 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 Biomathematics M207A and Biostatistics M227A. Lecture, three hours; discussion, one hour. Prerequisites:
M207. 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 M238. Seminar, discussion, laboratory, one hour. Requisites: Biostatistics 110A, 110B, Mathematics 170A. Theoretical models in molecular evolution, with focus on phylogenetic techniques. Topics include evolutionary tree reconstruction methods, study 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.

CM222. Mouse Molecular Genetics. (2) Same as Microbiology CM222. Lecture, two hours. Requisites: Life Sciences 4, Microbiology CM256. 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, transparency and its application in developmental biology, stem cell biology, neurobiology, and modeling human genetic disorders. Reading materials include original papers and reviews. Concurrently scheduled with course CM122. S/U or letter grading.

CM224. Computational Genetics. (4) Same as Bioinformatics CM224 and Computer Science CM224. Lecture, four hours; discussion, two hours; outside study, six hours. Requisites: Computer Science 32 or Program in Computing 10C with grade of C– or better, and Biostatistics 100A or 110A or Mathematics 170A or Statistics 100A. Designed for engineering students as well as students from biological sciences and medical school. Introduction to computational analysis of genetic variation and computational interdisciplinary research in genetics. Topics include introduction to genetics, identification of genes involved in disease, inferring human population history, technologies for obtaining genetic information, and genetic sequencing. Focus on formulating interdisciplinary problems as computational problems and then solving those problems using computational techniques from statistics and computer science. Concurrently scheduled with course CM124. Letter grading.

M229S. Seminar: Current Topics in Bioinformatics. (4) (Same as Biostatistics M229S and Computer Science M229S.) Seminar, four hours; outside study, eight hours. Designed for graduate engineering students, as well as students from biological sciences and medical school. Instruction to current topics in bioinformatics, genomics, and computational genetics and preparation for computational interdisciplinary research in genetics and genomics. Topics include genomic technologies, functional genomics, association analysis, association study design, isolated and admixed populations, population substructure, human structural variation, model organisms, and genomic technologies. Interdisciplinary 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 genetics related to molecular genetics and relevant technologies. Topics include genomic technologies, human genome, mapping and identification of disease mutations, transcriptionomics, proteomics, functional genomics, epigenetics, and stem cells. Reading materials include original research articles and reviews. Letter grading.

236B. Advanced Human Genetics B: Statistical Aspects. (4) Lecture, three hours; computer laboratory, one hour. Recommended preparation: introductory statistics knowledge equivalent to Biostatistics 100A or Statistics 13 and general genetics knowledge equivalent to Ecology and Evolutionary Biology 121, Human Genetics 236A, or Molecular, Cell, and Developmental Biology 144. Statistical and population genetics related to analysis of complex human genetic traits. Reading materials include original research papers and reviews. Letter grading.

C236C. Societal and Medical Issues in Human Genetics. (5) Lecture, three hours; discussion, two hours. Sequence of entire human genome is now known. Consideration of how this knowledge impacts concepts of ourselves as individuals and of our place in the biological universe, concepts of race/ethnicity and gender, ability of DNA-based forensics to identify specific individuals, ownership and commodification of genes, issues of privacy and confidentiality, issues of genetic discrimination, issues of predictive genetic testing. Discussion of human cloning for reproductive and therapeutic purposes. Exposure to medical genetic cases. Discussion of role of whole genome sequencing in clinical setting. Human Genome Project influence on medicine and on our concepts of self and identity. Concurrently scheduled with course CM136C. Letter grading.

C244. Genomic Technology. (4) Lecture, three hours; discussion, two hours. Emphasis on recent developments in study, six hours. Requisites: Computer Science 32 or Program in Computing 10C with grade of C– or better, and Biostatistics 100A or 110A or Mathematics 170A or Statistics 100A. Designed for engineering students as well as students from biological sciences and medical school. Introduction to computational analysis of genetic variation and computational interdisciplinary research in genetics. Topics include introduction to genetics, identification of genes involved in disease, inferring human population history, technologies for obtaining genetic information, and genetic sequencing. Focus on formulating interdisciplinary problems as computational problems and then solving those problems using computational techniques from statistics and computer science. Concurrently scheduled with course CM124. Letter grading.

M252. Seminar: Advanced Methods in Computational Biology. (2) Same as Bioinformatics M252 and Chemistry M252S. Seminar, one hour; discussion, one hour. Designed for advanced graduate students. Examination of computational methodology in bioinformatics and computational biology through presentation of current research literature. How to select and apply methods from computational and mathematical disciplines to problems in bioinformatics and computational biology; development of novel methodologies. S/U or letter grading.

M255. Mapping and Mining Human Genome. (3) (Same as Pathology M255.) Lecture, three hours. Basic molecular genetic and cytogenetic techniques of gene mapping. Selected regions of human genome map scrutinized in detail, particularly gene families and clusters of genes that have remained linked from mouse to human. Discussion of localizations of disease genes. S/U or letter grading.

M260A. Introduction to Bioinformatics. (4) (Same as Biostatistics M260A, Chemistry CM260A, and Computer Science CM221.) Lecture, four hours; discussion, two hours. Recommended requisites: Biostatistics 100A or 110A or Mathematics 170A or Statistics 100A, and Computer Science 32 or Program in Computing 10C with grade of C– or better. Prior knowledge of biology not required. Designed for engineering students as well as students from biological sciences and medical school. Introduction to bioinformatics and methodologies, with emphasis on concepts and inventing new computational and statistical techniques to analyze biological data. Focus on sequence analysis and alignment algorithms. S/U or letter grading.

M278. Statistical Analysis of DNA Microarray Data. (4) (Same as Biostatistics M278.) Lecture, three hours. Recommended requisites: Biostatistics 200C. Instruction in use of statistical tools used to analyze microarray data. Structure corresponds to analytical protocol an investigator might follow when working with microarray data. S/U or letter grading.

282. Human Genetics Seminar and Journal Club. (Seminar, one hour biweekly; discussion, one hour biweekly. Limited to graduate students. Participation and presentation in biweekly journal club meeting whose topics reflect those of that in Human Genetics Seminar Series during following week. Journal club participation required. S/U grading.

596. Directed Individual Study and Research. (2 to 12) Tutorial, to be arranged. Individual study or research for graduate students. May be repeated for credit. S/U grading.

597. Preparation for M.S. Comprehensive Examination or Ph.D. Qualifying Examinations. (2 to 12) Tutorial, to be arranged. Individual study for M.S. comprehensive examination or Ph.D. qualifying examinations. May be repeated for credit. S/U grading.


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**INDO-EUROPEAN STUDIES**

**Interdepartmental Program College of Letters and Science**

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H. Craig Melchert, Ph.D., Chair

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Stephanie W. Jamison, Ph.D. (Asian Languages and Cultures)

H. Craig Melchert, Ph.D. (Linguistics)

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-European 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 detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website, http://grad.ucla.edu/gasaa

/library/pgmrqintro.htm. In many cases, more
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, 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 Mesopotamia left little evidence of corresponding earliest developments, their antiquity and, in case of China and Mesopotamia, their evident isolation mark these centers as loci of independent development 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 Greek, Roman, and others arose in 1st millennium B.C. and how it compares to other modern writing systems. P/NP or letter grading.

M70. Origin of Language, (5) (Same as Communication Studies M70 and German 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.

Upper Division Courses

131. European Archaeology, Neolithic to Bronze Age, (4) Lecture, four hours. Survey of European cultures from beginning of food-producing economy in 7th millennium B.C. to beginning of Bronze Age in 3rd millennium B.C. P/NP or letter grading.

132. European Archaeology, Bronze Age, (4) Lecture, four hours; discussion, one hour (when scheduled). 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 requisites: Linguistics 1 or 20. Indo-European languages (ancient and modern), including their relationships, chief characteristics, writing systems, and sociolinguistic contexts; nature of reconstructed Indo-European proto-language and proto-culture. One or more Indo-European languages may be investigated in detail. P/NP or letter grading.

C160. Indo-European Comparative Mythology and Poetics, (4) Seminar, three hours. Preparation: familiarity with at least one ancient Indo-European language. Comparison of major Indo-European mythological and poetic traditions and reconstruction of their common sources. Topics include divinities and their names; symbolic systems in social context; myths, folk narratives, belief systems; relations with other traditions; literary continuations of mythopoetic material. Concurrently scheduled with course C160. S/U or letter grading.

596. Directed Individual Studies. (2 to 8) Tutorial, to be arranged. S/U or letter grading.

597. Preparation for Ph.D. Qualifying Examination, (2 to 8) Tutorial, to be arranged. S/U or letter grading.


Information Studies

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Anne J. Gilliland-Svaretz, Ph.D.
Leah A. Lievrouw, Ph.D.
Beverly P. Lynch, Ph.D.
Mary Niles Maack, D.L.S.

Professors Emeriti

Marcia J. Bates, Ph.D.
Howard A. Besser, Ph.D.
Robert M. Hayes, Ph.D.
John V. Richardson, Ph.D.
Elaine Svenonius, Ph.D.
Diana M. Thomas, Ph.D.
Virginia A. Walter, Ph.D.

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Assistant Professor

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Lecturers

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Snowden R. Becker, M.L.I.S.
Keri S. Botelho, M.L.S.
Lynn Boydien, M.L.S.
Loretta M. Gaffney, M.S.
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Mary E. Menzel, M.L.I.S.
Eva Mitnick, M.L.S.
Ward G. Smith, M.L.I.S.

Adjunct Assistant Professor

Susan M. Allen, Ph.D.

Visiting Assistant Professor

Tharron A. Bloomfield, M.A.S.

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://grad.ucla.edu/gasaa/library/pgmintro.htm. In many cases, more
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

10. Fundamentals of Information Searching and Evaluation. (5) Lecture, one hour; discussion, one hour; laboratory, two hours. Designed for first-year undergraduate students and as support for Information Studies courses. Introduces the awareness and skills required in using current bibliographic and information resources that encompass both general and specialized materials. Specifically designed to facilitate knowledgeable use of UCLA libraries and efficient retrieval of information. Letter grading.

20. Introduction to Information Studies. (5) Lecture, five hours. Designed for undergraduate students. Exploration of social, economic, cultural, ethical, and structural aspects of information, and issues that are critical, emergent, and dominant in society as information proliferates globally via networks and computer-mediated communication. 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 technologies, social, cultural, and political context 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, especially those interested in design, hands-on 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 and knowledge are created, integrated, disseminated, organized, used, and preserved. Topics include history of communication technologies, evolution of literacy, development of information professions, and social issues related to information access. Letter grading.

201. Ethics, Diversity, and Change in Information Professions. (4) Lecture, two hours; discussion, two hours. Problems and solutions in professional practice, including habits of service and practice, the way we think about, 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. Letter grading.

203. Seminar: Intellectual Freedom and Information Policy Issues. (4) Seminar, four hours. Investigation of concept of intellectual freedom, information policy issues, and underlying societal values to be determined by requirements and background of enrolled students. Topics include relevant library terminology and concepts; survey of languages and transliteration systems; acquisition of Slavic and East European library materials; Slavic and East European scholarship in the West; relevant reference sources, archival resources, and research methods; survey of online databases; compilation of bibliographies. S/U or letter grading.

223. Records and Information Resources Management. (4) Lecture, three hours. Introduction to records and information resources management in corporate, government, and other organizational settings, including records management systems, records consolidation and filing systems, records retention scheduling, records protection and security, reprographics and image management technology, and litigation support. Letter grading.


225. Latin American Research Resources. (4) (Same as History M225 and Latin American Studies M225.) Discussion, three hours. General and specialized materials in fields concerned with Latin American studies. Library research techniques provide experience and competency required for future bibliographic research. S/U or letter grading.

227. Information Services in Culturally Diverse Communities. (4) Lecture, four hours. Issues in provision of information services in multiethnic and multilingual 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 services and services from points of view of their cost and effectiveness in meeting desired objectives. Review of principles of costing. Study of literature in which measures have been developed for objective measure of document collections, reference and information retrieval services, document delivery systems, networking, and technical services, including circulation, acquisitions, and document description. S/U or letter grading.

M229B. Africana Bibliography and Research Methods. (4) (Same as African Studies M229B.) Discussion, four hours. Problems and text samples 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 comprehensive databases. S/U or letter grading.

M229C. Introduction to Slavic Bibliography. (2) (Same as Slavic M229.) Lecture, two hours. Introduces to Slavic and East European bibliography for the humanities and social sciences. Survey of sources and specializations determined by requirements and background of enrolled students. Topics include relevant library terminology and concepts; survey of languages and transliteration systems; acquisition of Slavic and East European library materials; Slavic and East European scholarship in the West; relevant reference sources, archival resources, and research methods; survey of online databases; compilation of bibliographies. S/U or letter grading.

233. Records and Information Resources Management. (4) Lecture, three hours. Introduction to records and information resources management in corporate, government, and other organizational settings, including records management systems, records consolidation and filing systems, records retention scheduling, records protection and security, reprographics and image management technology, and litigation support. Letter grading.


M238. Environmental Protection of Collections for Museums, Libraries, and Archives. (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 to identify and control agents and understanding of materials 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 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.

240. Management of Digital Records. (4) Lecture, three hours. Introduction to 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, one hour. Requisites: courses 200, 260. Provides fundamental knowledge and skills enabling information professionals to link users with information. Overview of structure of literature in different fields; information-seeking behavior of user groups; communication with users; development of search strategies. Letter grading.

246. Information-Seeking Behavior. (4) Lecture, three hours; discussion, one hour. Study of factors and influences, both individual and social, associated with human beings needing, using, and acting on information. Topics include information theory, human
information processing, information flow among social and occupational groups, and research on information needs, law, etc. Letter grading.


260. Information Structures. (4) Lecture, four hours; discussion, one hour. Required core course. Introduction to various systems and tools used to organize materials and provide access to them, with emphasis on principles. Ethics of organization: classification, hierarchy, arrangement, and display of records. Provides background for further studies in cataloguing, reference, information retrieval, and database management. Letter grading. 260. Information Systems. (4) Lecture, seminar, four hours. Requisite: course 245, one other information structures course. Specialized studies in selected areas of descriptive and bibliographic cataloging, subject vocabularies and classifications, and metadata. May be repeated once. Letter grading.

270. Introduction to Information Technology. (4) Lecture, four hours. Introduction to theories and principles of information technologies. Topics include current issues of information technologies, design and development of information systems. Beginning ground for further studies in information retrieval and design and maintenance of information systems. Seminar format. Letter grading.

272. Human/Computer Interaction. (4) Lecture, four hours. Preparation: one programming course, one inferential statistics course. Survey of social, behavioral, and technical aspects of computer and human interaction, with readings from several disciplines. Extensive use of technology demonstrations and class discussions. Recommended for students in any discipline involved in design or implementation of information technologies. Letter grading.

274. Database Management Systems. (4) Lecture, three hours; laboratory, two hours. Topics, principles, and practicalities of database systems, including data models, retrieval mechanisms, evaluation methods, and storage, efficiency, and security considerations. S/U or letter grading.

275. Development of Cultural Information Sources Using Digital Multimedia. (4) Lecture, two hours; laboratory, two hours. Overview of technologies, techniques, and principles underlying development and packaging of cultural information resources into digital multimedia such as digital libraries, World Wide Web homepages, and CD-ROMs, as well as user, policy, presentation, motivation, and evaluation considerations. Letter grading.


279. Seminar: Information Systems. (4) Lecture, two hours; discussion, two hours. Requisite: courses 245, 260. Design implications of interaction between users and features of automated information systems and interfaces that are specific to information-seeking process. Emphasis on search strategy and subject access through use of thesaurus and other vocabularies. Letter grading.

280. Social Science and Research Methodology for Information Studies. (4) Lecture, four hours. Understanding of nature, uses, and practice of research appropriate to information studies. Identification of research problems; evaluation of search. Social science quantitative and qualitative methods. Emphasis on inquiry methodology and empirical research. S/U or letter grading.


291A. Doctoral Seminar: Theoretical Traditions in Information Studies. (4) Seminar, four hours. Nature of information studies, social history, history of ideas, and ethical accounts of information and of information arts and sciences. Conceptions, theories, and models of information; information-related artifacts, agents, contexts, institutions, practices, properties, values, and related phenomena. Interdisciplinary context—subfields of information studies and cognate disciplines. Frameworks for theory construction, such as critical theory, discourse analysis, hermeneutics, phenomenology, semiotics, social epistemology. Letter grading.

291B-291C. Special Topics in Theory of Information. (4-4) (Not offered Fall Quarter 2012.) Seminar, four hours. Enforced requisites: course 291A. Topics include information and evidence—record-keeping and memory-making, preservation of community identity, accountability and trust. Information and design, implementation of information systems and services, information aesthetics. Information retrieval and knowledge organization. Information seeking, access, and use—contexts, techniques, needs, barriers. Information and power—groups, ideologies, identities, structures. Information and value—information ethics, evaluation of information services. Information policy and law—processes, institutions, players, stakes. Information institutions and professions—domains, ecologies, cultures, communities. Economies, histories, and political accounts of information. Letter grading.

298A. Doctoral Seminar: Research Methods and Design. (4) (Formerly numbered 298B.) Seminar, four hours. Survey of qualitative, quantitative, and historical research designs. Ethical and practical considerations, data collection and measurement; indexes, scales, and sampling; experimental, survey, field, and evaluation research; data analysis. Letter grading.

298B-298C. Special Topics in Methodology of Information Studies. (4-4) Seminar, four hours. Enforced requisite: course 298A. Topics include anthropological fieldwork methods, archival methodology, bibliographical studies, textual analysis, discourse analysis, historical methods, information validation, 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, 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 interactive sessions, 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 as teaching assistant, associate, or fellow. Teaching apprenticeship under active guidance and supervision of regular faculty member responsible for curriculum and instruction at UCLA. May be repeated for credit. S/U grading.

400. Professional Development and Portfolio Design. (2 to 4) Lecture, two hours; discussion, two hours. Preparation: completion of information studies core courses. Drawing on literature from many fields, exploration of issues related to professional development, such as career planning, continuing education, mentoring, and reflective practice; students also engage in process of guided portfolio design for M.L.I.S. ment, such as career planning, continuing education, S/U grading.

410. Management Theory and Practice for Information Professionals. (4) Lecture, two hours; discussion, two hours. Principles and practice of management at all types of organizations where information professionals work. S/U or letter grading.


422. College, University, and Research Libraries. (4) Lecture, four hours. Organization, administration, collections, facilities, finances, and problems of college and university libraries and their relationships within institutions of which they are part. Functions of research libraries and work of their staffs in serving scholars. S/U or letter grading.


425. Library Services and Programs for Children. (4) Lecture, four hours. Overview of professional library service to children aged 14 and under; provides opportunities for students to gain experience in particular skills needed to provide that service. Letter grading.

426. Library Services and Literature for Youth. (4) Lecture, four hours. Overview of literature and programs which are of interest to young adults (seventh grade and above). Discussion of special problems in working with young people and psychology of teenagers. S/U or letter grading.


438A. Seminar: Advanced Issues in Archival Science — Archival Appraisal. (4) Seminar, four hours. Requisite: course 431. Examination of contributions of key figures in development of archival appraisal theory; identification and evaluation of distinct movements in archival appraisal; identification of cultural, political, sociological, and technological movements that can have impact on appraisal methods. Letter grading.

438B. Seminar: Advanced Issues in Archival Science — Archival Description and Access Systems. (4) Seminar, four hours. Requisite: course 431. Exploration of history of archival description and access systems in the U.S. and their development since World War II; data collection; access tools and implications of these issues in development of online archival access systems. Letter grading.


448. Information Instruction: Theory and Technique. (4) Lecture, four hours. History, theory, methods, and materials of user education/bibliographic instruction in libraries and other information retrieval environments. Examination of variety of user education/bibliographic instruction theories and methodologies, including overview of planning and administration. Identification of problems in user education/bibliographic instruction. Applications of methods of teaching use of libraries and information resources. S/U or letter grading.

455. Government Information. (4) Lecture, four hours. Introduction to nature and scope of government information promulgated by federal government, as well as by state, municipal, international, and foreign governments. Problem-oriented approach. S/U or letter grading.

457. Health Sciences Librarianship. (4) Lecture, four hours. Health sciences information resources and services, management of health sciences information resources and services, health sciences environment and policies, information systems and technology. Letter grading.


473. Information Technology and Libraries. (4) Lecture, four hours. Overview of major components of library automation: circulation control, acquisitions and serials, public access information systems, and data conversion. Relationships among various automation entities, including internal library automation, networks and vendors (such as bibliographic utilities, regional networks, and online services), and automation of parent organizations (universities, municipalities, corporations, and government agencies). Development in standards for information processing and new information technologies. Letter grading.

479. Fieldwork in Libraries or Information Organizations. (4 or 8) Fieldwork, 12 or 24 hours depending on nature and complexity of experience or project. Faculty-directed field experience in approved library, archive, 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 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.

502. 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 for Society and Genetics / 411
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Stefan Timmermans, Ph.D.
Janet S. Sinsheimer, Ph.D.
Russell Korobkin, J.D.
Martie G. Haselton, Ph.D.
Wayne W. Grody, M.D., Ph.D.
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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 that inextricably link society, culture, and biology, such as medical privacy rights, gene patents, regulation of stem cell research, and questions of race, gender, and identity.

Programmatically, the majors consist of required elements that develop critical thinking skills, knowledge, and excellence in written and 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 internships. The mission is to educate students who become leaders in diverse areas such as law, medicine, humanities, social sciences, and biological sciences, and to have them interact and work together to form a deep understanding of the issues at the intersection of human social systems, evolutionary biology, and genetics.

The minor in Society and Genetics provides undergraduate students with the opportunity to understand and probe the complex problems and possibilities presented by modern genetics, with special attention to their social context and content. Given the dynamic interaction between genetics and the social world in which it is embedded, the minor is of necessity multidisciplinary and emphasizes a collaborative cross-disciplinary approach to instruction in the core courses of the minor and exposure to a wide range of disparate scholarship through elective courses available in such areas as anthropology, biology, history, philosophy, public policy, and sociology.

Undergraduate Study
Human Biology and Society B.A.

Human Biology and Society Premajor
All students intending to major in Human Biology and Society must complete Society and Genetics 5 with a grade of B or better. They may then enroll as premajors. After completing the premajor requirements with a minimum grade-point average of 2.9 or better, students must submit an application for admission to 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 College M70A, 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 Gender Studies 10, Molecular, Cell, and Developmental Biology 60, Philosophy 4, 6, 8, 22, or Sociology M5. 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. Admission to the major is by competitive application, using student courses, grades, grade-point averages, and personal statements of interest as minimum standards for consideration. Students should consult the undergraduate counselor in 1308 Rolfe Hall about the application process.

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/admin_tr.htm for up-to-date information regarding transfer selection for admission.

The Major
Required: Society and Genetics 101, 105A, 105B, 191R; two terms of course 193; 4 units from course 195CE, 196, or 199; and five courses from one of the following concentration areas, including at least one society and genetics course:


Historical and Social Studies of Science: Anthropology M125A, 153R, 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, Gender Studies 134, M162, M164, M180B, Geography M109, M115, Global Studies 100A, 100B, History M151C, 173A, 179B, 180A, 180C, Honors College 177, Human Genetics C144, Neurobiology M169, Philosophy 124, 125, 129, 130, 132, 155, Society and Genetics M102, 130, 131, 161, 163, 175, 197, 199, Sociology M138, 143, M148, 154, 156, 170. Students may petition to apply a second term of Society and Genetics 195CE toward this concentration area. 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 Society and Genetics 193) must be taken for letter grade 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


Microbiology and Immunology: Microbiology, Immunology, and Molecular Genetics 101, 185A, and one course from 103AL, 106, 107, 158, or 168

Molecular Biology and Genomics: Molecular, Cell, and Developmental Biology 144, 172, and one course from CM156, Human Genetics CM124, C144, Microbiology, Immunology, and Molecular Genetics 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 complete Society and Genetics 5 with a grade of B or better. They may then enroll as premajors. After completing the premajor requirements with a minimum grade-point average of 2.5 or better, students must submit an application for admission to the major at the undergraduate counselor’s office in 1308 Rolf Hall.

Preparation for the Major

Required: Anthropology 7, Chemistry and Biochemistry 14A, 14B, 14BL, 14C, 14L, 14D (or 20A, 20B, 20L, 30A, 30AL, 30B, 30BL), Life Sciences 1, 2, 3, 4, 23L, Mathematics 3A, 3B, 3C (or 31A, 31B, 32A), Physics 1A, 1B, 1C, 4A, 4BL (or 6A, 6B, 6C), Society and Genetics 5, 10, and one each from Cellular and Molecular Biology 144, 172, and Psychology 110, 112A, 112B, 115, 132, 155, 161, 197, 199, Sociology 195CE. Students may petition to apply a second term of Society and Genetics 195CE toward this concentration area. 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, Gender Studies 134, M162, M164, M180B, Geography M109, M115, Global Studies 100A, 100B, History M151C, 179A, 179B, 180A, 180C, Honors Collegium 177, 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, M148, 154, 156, 170. Students may petition to apply a second term of Society and Genetics 195CE toward this concentration area. 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.

Refer to the UCLA Transfer Admission Guide at http://www.admissions.ucla.edu/prospect/admissions.htm for up-to-date information regarding transfer selection for admission.

The Major

Required: Society and Genetics M102, 105A, 105B, 191R; two terms of course 193; 4 units from course 195CE, 196, or 199; and five courses from one of the following concentration areas, including at least one society and genetics course:


Ecological and Evolutionary Biology 120, 121, 126, 129, 135, 175, 176, Gender Studies M114, M159, M162, M165, M167, Linguistics C135, Molecular, Cell, and Developmental Biology CM156, Philosophy 132, M187, Psychology 110, 112A, 112B, 115, 160, Society and Genetics 161, 197, 199, Sociology 156. Students may petition to apply a second term of Society and Genetics 195CE toward this concentration area. See below for courses in the optional subfocus areas of ecology and evolutionary biology, and psychology and mental health.
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 bioethics and public science policy, evolutionary biology, culture, and behavior, historical and social studies of life sciences, medical genetics and public health, and population genetics and history, and central thematic issues shared across concentrations, such as commercialization of life and public understanding of science. Letter grading.

Upper Division Courses

101. Genetic Concepts for Human Sciences. (5) Formerly numbered 102W. (Same as Human Genetics CM135.) Lecture; three hours; discussion, two hours. Sequence of entire human genome is now known. Consideration of how this knowledge impacts concepts of ourselves as individuals and of our place in biological universe, concepts of race/ethnicity and gender, ability of DNA-based forensics to identify specific individuals, ownership and commodification of genes, issues of privacy and confidentiality, issues of genetic discrimination, issues of predictive genetic testing. Discussion of human cloning for reproductive and therapeutic purposes. Exposure to medical genetics cases. Discussion of role of whole genome sequencing in clinical setting. Human Genome Project influence on medicine and on our concepts of self and identity. Letter grading.

105A. Ways of Knowing in Life and Human Sciences. (6) 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 used to study, measure, and experiment. Exploration of how they are manifest in technologies that cut across disciplines to help students evaluate explanatory models, standards of proof, and qualitative versus quantitative studies. Explorations may include DNA sequencing, tissue cultures, bioinformatics, statistics, photography and cinema, charts, trees, and databases. DNA sequencing is used to study gene functions, evolutionary patterns, and disease and plays role in legal context to reconstruct aspects of human history or to trace identity of people. Data bases play role in life sciences in administrative, commercial, and legal contexts. Photography is used in sciences and medicine (e.g., X-ray photography), as well as in art and forensics. Letter grading.

105B. Problems of Identity at Biology/Society Interface. (4) Lecture, three hours. Enforced requisite: course 5. Strongly recommended: course 105A. Exploration of problems of human identity that are inherently biological and social. Topics vary and may include race, obesity and nutrition, autism, deafness or disability, gender, intelligence, or sexuality. Topics contain set of intertwined problems so complex, so difficult to define, and so wrapped up in conceptions of what it is to be human, that it has spawned research from variety of perspectives in biological and human sciences. Students critically engage various intellectual perspectives — some competing, some complementary — that intersect on one particular topic. Examination of how researchers from social/
108. Human Biology, Genetics, and Society. (5) Lecture, three hours; laboratory, two hours. Limited to senior Human Biology and Society majors and Sociology and Genetics minors. Lectures, readings, discussions, and projects. Exploration of collaborative research project. Group-based research projects in mapping and staging contemporary controversy at intersections of human biology, genetics, and society. Reading of original material to make sense of both scientific concepts and social and political issues, with original research project and presentation required. Letter grading.

120. Using Genetics to Infer Human History. (4) Seminar, three hours. Early development of scientific method and systematic exclusion of those in subordinate social groups from scientific practice. Interrogation of binarized notions of culture and genetic knowledge and consideration of how norms and values embedded in Western science compare with indigenous or local knowledge systems. How medical research is motivated by competing assumptions of racial hierarchy and equality. Examination of governments’ use of science to classify racially inferior and contaminated foreigners as threats to sociocultural order. Exploration of how people use knowledge about their embodied experiences to demand rights and accept responsibility for their own health and vitality, either in opposition to or alliance with scientific experts. Discussion of practical and theoretical background (e.g., challenges of using ancient DNA, population genetic theory) necessary to critically evaluate genetic history studies examined later. Prehistory (such as origins of man anatomically and how human colonized world), genetics and scientific exclusion of Jews, and use to investigate major agricultural expansions in Europe, Asia, and Africa; Lebba people of South Africa; Anglo-Saxon migrations into British Isles; genetic legacy of origins of Hittites and Semitic people. May be credited toward Jewish or Etruscan foundation of royal family of Nso of Cameroon; and male line conservation of Jewish Cohanim priesthood, descendents of Aaron, brother of Moses. Letter grading.

121. Race, Science, and Citizenship. (4) Seminar, three hours. Exploration of how science and technology has shaped human history in ways that traditional historical investigation sometimes cannot. Introduce to field for nonspecialists. Consideration of how norms and values embedded in Western science compare with indigenous or local knowledge systems. How medical research is motivated by competing assumptions of racial hierarchy and equality. Examination of governments’ use of science to classify racially inferior and contaminated foreigners as threats to sociocultural order. Exploration of how people use knowledge about their embodied experiences to demand rights and accept responsibility for their own health and vitality, either in opposition to or alliance with scientific experts. Discussion of practical and theoretical background (e.g., challenges of using ancient DNA, population genetic theory) necessary to critically evaluate genetic history studies examined later. Prehistory (such as origins of man anatomically and how human colonized world), genetics and scientific exclusion of Jews, and use to investigate major agricultural expansions in Europe, Asia, and Africa; Lebba people of South Africa; Anglo-Saxon migrations into British Isles; genetic legacy of origins of Hittites and Semitic people. May be credited toward Jewish or Etruscan foundation of royal family of Nso of Cameroon; and male line conservation of Jewish Cohanim priesthood, descendents of Aaron, brother of Moses. Letter grading.

130. Biotechnology and Society. (4) Lecture, three hours. Technical manipulation of living matter from human biology and society. Discussion of genetic basis of behavior, human biology and society. Consideration of how norms and values embedded in Western science compare with indigenous or local knowledge systems. How medical research is motivated by competing assumptions of racial hierarchy and equality. Examination of governments’ use of science to classify racially inferior and contaminated foreigners as threats to sociocultural order. Exploration of how people use knowledge about their embodied experiences to demand rights and accept responsibility for their own health and vitality, either in opposition to or alliance with scientific experts. Discussion of practical and theoretical background (e.g., challenges of using ancient DNA, population genetic theory) necessary to critically evaluate genetic history studies examined later. Prehistory (such as origins of man anatomically and how human colonized world), genetics and scientific exclusion of Jews, and use to investigate major agricultural expansions in Europe, Asia, and Africa; Lebba people of South Africa; Anglo-Saxon migrations into British Isles; genetic legacy of origins of Hittites and Semitic people. May be credited toward Jewish or Etruscan foundation of royal family of Nso of Cameroon; and male line conservation of Jewish Cohanim priesthood, descendents of Aaron, brother of Moses. Letter grading.


160. Politics of Heredity, (4) Seminar, three hours. Exploration of intersection of politics and genetics in liberal democracies and totalitarian regimes. How genetics has been used to consolidate and undermine political authority, and how political authority has been employed to both promote and restrict genetics. Consideration of several historical episodes such as rise to power in Soviet Union of T.D. Lysenko, peasant agronomist who rejected Mendelsian approach to genetics; participation of geneticists in creation of racial state in Nazi Germany; and debates over compulsory sterilization of mental defectives in U.S., Canada, and Europe from 1920s to 1970s. Consideration of controversies over genetically modified foods and regulation and governance of regenerative technologies, and rise of disease advocacy groups as important players in determining direction and funding of genetic research. Letter grading.

161. Controversy and Behavior Genetics. (4) Seminar, three hours. Behavior genetics is controversial and seeks genetic links to behavior, personality, mental illness, and criminality, among many other traits. It explores differences between individuals, men and women, or racial groups, and what social policies might do about those differences. Analysis of causes and effects of controversy in behavior genetics using critical sociology and history. Consideration of scientific disputes between behavior geneticists and their critics, distinctive history and social organization of behavior genetics as group of scientists, and public reception of behavior genetics and disputes about its social and policy implications. Letter grading.

162. Biotechnologies, Law, and Body. (4) Seminar, three hours. Notions of bodily integrity, privacy, right to life, and to choose to die have created perception that our bodies are protected by law, that somehow we possess ownership and control over our bodies, encompassing not only our physical being but intangible information contained within our materialized forms. Questions of whether these rights to our own bodies exist and are secured by common and constitutional law, in light of recent developments in biotechnology. Introduction to political and legal discourse of rights. Historical perspective of how law and science are connected to bodies. Legal and policy issues emerging from new biotechnological developments. Examination of reproductive issues, including abortion, assisted reproduction, disputes regarding disposition of embryos, preimplantation genetic testing, cloning, and genetic enhancements. Letter grading.


175. Current Directions in Social and Historical Study of Science. (4) Seminar, three hours. Preparation for: some familiarity with field of science and technology. Exploration of the current work in history and social study of science and technology, with special emphasis on recent developments, possible future directions, and questions of disciplinarity and interdisciplinary. Topics to include histories of recent and emerging science; biocapital, biocitizenship, biosecurity, and/or biopolitics; social and historical approaches to finance and money; and social and historical approaches to risk, preparedness, and safety. Letter grading.

180. Special Courses in Society and Genetics. (4) Lecture, three hours. Departmentally sponsored experimental or temporary course 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, one hour. Course designed to bring together advanced undergraduate students undertaking faculty-supervised tutorial research to discuss their own work or related work in society and genetics. May be repeated once for credit with topic change. P/NP grading.

191. Variable Topics Research Seminars: Perspectives in Society and Genetics. (5) Seminar, three hours. Enforced requisites: courses 101 (or Life Sciences 4), 102W. Discussion of genetics and society from historical perspective. How science of genetics itself is deeply social. Study of how biologists and anthropologists have conceptualized relations of genes and society. Manuscripts of research on genetics, human nature, human flourishing, and dignity that seem to privilege nature as something that can guide ethical thought and action. How these accounts would encourage or discourage people from manipulating their genetic inheritance. Consideration of what is new in new genetics. Current discussions of promise and peril of genetics in relation to society. Culminating paper required. May be repeated once for credit with topic change. Letter grading.

191R. Capstone Seminar: Human Biology and Society. (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. Student peers, whose major studies fall within different concentrations, share and learn from each others’ multiple perspectives while working together on one topic presented in class. Topics vary and come from major concentrata. Culminating project is team writing assignment, such as grant proposal, report to Congress on contemporary issue, or business plan for new kind of company or nonprofit firm addressing issues in human biology and society. Letter grading.

1915. Capstone Seminar: Society and Genetics. (5) Seminar, three hours. Enforced requisites: courses 101 (or Life Sciences 4), 102W. Discussion of genetics and society from historical perspective. How science of genetics itself is deeply social. Study of how biologists and anthropologists have conceptualized relations of genes and society. Manuscripts of research on genetics, human nature, human flourishing, and dignity that seem to privilege nature as something that can guide ethical thought and action. How these accounts would encourage or discourage people from manipulating their genetic inheritance. Consideration of what is new in new genetics. Current discussions of promise and peril of genetics in relation to society. Culminating paper required. May be repeated once for credit with topic change. Letter grading.


195CE. Community or Corporate Internships in Society and Genetics (2-3). 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 graduatet student coordinator. Limited to one internship, two credit hours maximum. Letter grading.
The IoES offers creative, multidisciplinary academic programs and courses that address the full complexity of current environmental problems and sustainable solutions. The Bachelor of Science degree in Environmental Science is an innovative dual-component degree program for students seeking a challenging and invigorating science curriculum. The first component, the Environmental Science major, provides students with disciplinary breadth in several areas important to environmental science. The second component, a minor or 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 designed for students who wish to gain a deeper understanding of the relationships between environmental science and associated social and political issues.

The IoES also sponsors the Environment/General Education Clusters M1A, M1B, M1CW on the global environment. The cluster format is a series of three integrated courses taught over the Fall, Winter, and Spring Quarters. The Fall and Winter Quarter courses consist of lectures and discussions. The Spring Quarter consists of seminars and activities in which students explore specialized environmental and sustainability topics such as the history of environmental thought, environmental policy, and the impacts of human population.

At the graduate level, the IoES offers the Environmental Science and Engineering (D.Env.) degree program that was founded in 1973 by Nobel laureate Dr. Willard Libby, who perceived a need to train environmental scientists, engineers, and policymakers in a more interdisciplinary manner than is afforded by traditional Ph.D. programs.

The program is designed with an appropriate balance of breadth and specific skills, based on a strong master’s-level foundation in a science or engineering discipline. The curriculum consists of formal coursework across a full spectrum of relevant physical, biological, social, and engineering disciplines, as well as interdisciplinary research training through nine-month problems courses.

The program has awarded the Doctor of Environmental Science and Engineering degree to over 200 students, and UCLA remains unique in the country in awarding such a degree.

Undergraduate Study

The Environmental Science major is a designated capstone major. In collaboration with a local agency or nonprofit institution, students work individually and in groups to complete projects that require them to integrate many of the skills, principles, theories, and concepts they have learned throughout the curriculum and apply them to real systems. Students are expected to contribute meaningfully to the analysis and solution of particular environmental science issues involving multiple disciplines and stakeholders with different perspectives. Those completing the major should possess critical thinking skills, problem-solving abilities,
and familiarity with essential computational, data collection, and analysis skills, as well as demonstrate effective oral and written communication skills. Graduates should also be able to identify key ethical issues and analyze the consequences of various professional dilemmas, as well as work productively as part of a team.

Environmental Science B.S.

**Capstone Major**

The Environmental Science B.S. program represents strong collaboration between the Institute of the Environment and Sustainability and the Departments of Atmospheric and Oceannic Sciences, Civil and Environmental Engineering, Earth and Space Sciences, Ecology and Evolutionary Biology, Environmental Health Sciences, and Geography. The program is designed for students who are deeply interested in the study of environmental science. There are two components to the program, and both must be completed to receive the degree. The first component, the Environmental Science major, requires completion of lower division requirements grounded in basic natural sciences, a six-course upper division environmental science requirement reflecting the disciplinary breadth of environmental science, two social sciences/humanities courses, participation in an ongoing environmental science colloquium, and completion of an environmental science practicum. The second component is a minor or concentration in one of seven environmental science areas, each associated with a particular department. With assistance from IoES staff, students must formally apply to and be accepted by the associated department to receive the minor.

**Preparation for the Major**

**Required:** Chemistry 14A, 14B, and 14BL (or 20A, 20B, and 20L), Earth 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), or Mathematics 3C (or 32A) and Physics 1C (or 6C) 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 geographic/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 replications 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](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) One atmospheric and water science course from Atmospheric and Oceanic Sciences 101, 103, M105, 130, Earth and Space Sciences C132, 153, or Geography 105; (2) one climate science course from Atmospheric and Oceanic Sciences 102, Geophysics 102, 104, M106, or M131; (3) one Earth science course from Earth and Space Sciences 101, C113, 119, 135, 139, 150, Environment M127, Geography 100, 101, or M107; (4) one ecology and conservation biology course from Ecology and Evolutionary Biology 100, 109, 116, 151A, 154, Environment 121, Geography 111, or 113; (5) one environmental management course from Environment M134, M135, 160, 166, or Public Policy C115; (6) one pollutant source, 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, 129, 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
Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website, http://grad.ucla.edu/gasass /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 Institute of the Environment and Sustainability offers the Doctor of Environmental Science and Engineering (D.Env.) degree.

Environment

Lower Division Courses

M1A-M1B-M1CW. Environment and Sustainability. (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 grade. Class registration, three hours; discussion, two hours. Human impacts on Earth's ecosystems and social and technological solutions to environmental pollution and overpopulation. Human activities and environmental 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.

M10. Introduction to Environmental Science. (4) (Same as Atmospheric and Oceanic Sciences M10.) Lecture, three hours; laboratory, one hour. Limited to undergraduates. 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 environment and sustainability. Laboratory exercises to augment lectures. Letter grading.

M111. Conservation of Biodiversity. (4) Lecture, three hours; discussion, two hours. Not open for credit to students with credit for Evolutionary Biology 116. Examination of interrelation of natural biotic and human systems. Description of distribution of biodiversity and natural processes that maintain it. Conceptualization of various aspects of the management-dimension challenges required for mitigating threats. Letter grading.

M121. Conservation of Biodiversity. (4) Lecture, three hours; discussion, two hours. Not open for credit to students with credit for Evolutionary Biology 116. Examination of interrelation of natural biotic and human systems. Description of distribution of biodiversity and natural processes that maintain it. Conceptualization of various aspects of the management-dimension challenges required for mitigating threats. Letter grading.

M122. Integrated Coastal Management. (4) Lecture, three hours. Limited to undergraduates. Examination of integrated physical, chemical, and biological processes important to environment and sustainability. Examination of how ICM is being used in U.S. and around world to solve pressing ecological and socioeconomic problems. Letter grading.

M123. Coastal Ecology in Southern Thailand. (5) Lecture, three hours; fieldwork, five hours. Interrelationship between coastal and marine organisms and environmental factors, including physical, chemical, biological, and geological environment; population dynamics and impact of natural and anthropogenic changes on foraminiferal distribution. P/NP or letter grading.

M127. Soils and Environment. (4) (Same as Geology and Evolutionary Biology M127 and Geography M127.) Lecture, three hours; discussion, one hour; field trips. General treatment of soils and environmental implications: soil development, morphology, and worldwide distribution of soil orders; physical, chemical, hydrologic, and biological properties; water use, erosion, and pollution; management of soils as related to plant growth and distribution. P/NP or letter grading.

M130. Environmental Change. (4) (Same as Geography M131.) Lecture, three hours; reading period. Limited to seniors. Examination of natural processes producing environmental changes over past two million years. How present landscape reflects past conditions. Effects of environmental change on people. Increasing importance of human activity in environmental modification. Focus on impact of natural and anthropogenic changes on forests. P/NP or letter grading.

M131SL. Gender and Sustainability: Local-Global Connections. (5) Lecture, three hours; service learning. Limited to juniors/seniors. Examination of gender roles, gendered labor, and gendered strategies of women vis-a-vis men. Investigation of gender and sustainability dimensions of food system, including agri-business, community-supported agriculture, gender and sustainability dimensions of food system, including agri-business, community-supported agriculture, and poorly planned development often threaten health of environment. Integrated coastal management (ICM) offers framework for resolving conflicts in manner that allows sustained, healthy, and sustainable system. Examination of how ICM is being used in U.S. and around world to solve pressing ecological and socioeconomic problems. Letter grading.

Upper Division Courses

M109. Human Impact on Biophysical Environment: What Science Has Learned. (4) (Same as Geophysics 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 three thematic topics (deforestation, desertification, and greenhouse gas increase and ozone depletion) and for selected case studies (Chapter 14: Ocean Environment). Lecture, three hours. Introduction to scientific studies of oceans, with emphasis on ecosystems and environmental issues. P/NP or letter grading.

M111. Earth and Its Environment. (4) (Same as Atmospheric and Oceanic Sciences M100.) Lecture, three hours. Overview of Earth as system of distinct, yet intimately related, physical and biological elements. Origins and characteristics of atmosphere, oceans, and land masses. Survey of history of Earth and of life on Earth, particularly in relation to evolution of physical world. Consideration of possibility of technological solutions to global environmental problems using knowledge gained during course. Letter grading.

M113. Los Angeles Watershed. (4) Lecture, three hours; discussion, one hour. Overview of how varying scales of influence from atmosphere/climate, basin hydrology, runoff, sewage treatment, wetlands ecology, and wetlands impacts on water circulation, and coastal biogeochemistry affect water resources in Los Angeles. Letter grading.

M114. Soil and Water Conservation. (4) (Same as Geography M107.) Lecture, three hours; discussion, one hour. Designed for juniors/ seniors. Systematic study of processes of and hazards posed by erosion, sedimentation, and pollution and 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.

M1. Introduction to Environmental Science. (4) (Same as Atmospheric and Oceanic Sciences M10.) Lecture, three hours; laboratory, one hour. Limited to undergraduates. 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 environment and sustainability. Laboratory exercises to augment lectures. Letter grading.

M111. Conservation of Biodiversity. (4) Lecture, three hours; discussion, two hours. Not open for credit to students with credit for Evolutionary Biology 116. Examination of interrelation of natural biotic and human systems. Description of distribution of biodiversity and natural processes that maintain it. Conceptualization of various aspects of the management-dimension challenges required for mitigating threats. Letter grading.

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M131SL. Gender and Sustainability: Local-Global Connections. (5) Lecture, three hours; service learning. Limited to juniors/seniors. Examination of gender roles, gendered labor, and gendered strategies of women vis-a-vis men. Investigation of gender and sustainability dimensions of food system, including agri-business, community-supported agriculture, and poorly planned development often threaten health of environment. Integrated coastal management (ICM) offers framework for resolving conflicts in manner that allows sustained, healthy, and sustainable system. Examination of how ICM is being used in U.S. and around world to solve pressing ecological and socioeconomic problems. Letter grading.
M132. Environmentalism: Past, Present, and Future. (4) [Same as Geography M115 and Urban Planning M165.] Lecture, three hours; discussion, one hour. Exploration of history and origin of major environmental ideas, movements or countermovements they spawned, and new and changing nature of modern environmentalism. Introduction to early ideas of environmentalism, how modern science reshaped environmental thought, and how this was later transformed by 19th-century ideas and rise of American conservation. Review of politics of American environmental thought and contemporary environmental questions as they relate to broader set of questions about nature of development, sustainability, and equity in environmental debate. Exploration of issues including global climate change, rise of pandemics, deforestation, and environmental justice impacts of war. Letter grading.

M133. Environmental Sociology. (4) [Same as Sociology M115.] Lecture, three hours; discussion, one hour. Relationship between society and environment. Analysis in detail of interrelations between social factors such as class, race, gender, and religion and environmental factors such as pollution, waste disposal, sustainability, and global warming. P/NP or letter grading.

M134. Environmental Economics. (4) [Same as Economics M134.] Lecture, three hours. Requisites: Economics 11 or 12, and Economics 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 consequences. P/NP or letter grading.

M135. California Sustainable Development: Economic Perspective. (4) [Same as Public Policy M149 and Urban Planning M163.] Lecture, three hours. Examination of specific environmental challenges that California faces from an economic perspective, with special emphasis on incentives of polluters to reduce their pollution and incentives of local, federal, and state government to address these issues. Focus on measurement and empirical hypothesis testing. P/NP or letter grading.

M137. Historical Geography of American Environment. (4) [Same as Geography M137.] Lecture, three hours. Designed for juniors/seniors. Study of systematic changes of natural environment in U.S. during historical time, with emphasis on interplay between and among natural factors of climate, soils, vegetation, and landforms, and human factors of settlement, economic activity, technology, and cultural traits. P/NP or letter grading.

138. Effective Methods of Social Change. (4) Lecture, three hours; discussion, two hours. Introduction to most effective methods of social change. Examination of social entrepreneurs, innovators, and visionaries. Review of traditional methods of activism and new theories of nonviolent social change. Case studies of success in restoring environment, resolving conflicts, curing diseases, overcoming poverty, and addressing other problems of social injustice as well as reviewing actual strategies and methods for social change in 21st century. Challenges that nonprofit advocates and community activists face today, including strategic planning, time management, networking, negotiation, and fund-raising. P/NP or letter grading.

150. Environmental Journalism, Science Communications, and New Media. (4) Lecture, three hours. Introduction to environmental journalism, science communications, and new media, including weekly guest lectures by prominent successful practitioners in writing and teaching science. Focus on trends, methods, genres, and theories of communicating environmental challenges, exploring solutions, and engaging public in newspapers, television, radio, movies, or other media. Discussion of possibilities and limitations of different media and importance of communications for environmental science, policy, public understanding, and individual decision making. Production by students of environmental communications in variety of media. Letter grading.


M155. Energy in Modern Economy. (4) [Same as Physics M155.] Lecture, three hours. Requisites: Mathematics 3A and 3B (or 31A and 31B), Physics 1A and 1B (or 6A and 6B). Introduction to basic energy concepts and examination of role of various energy sources, energy conversion technologies, and energy policy in modern life. Analysis of economic, ecological, and political impacts of energy production and consumption for future economic and environmental well-being. Integration of concepts and methods from physical and life sciences, engineering, environmental science, economics, and public policy. Basic quantitative skills provided to analyze and critique technical, economic, and policy choices to address challenges of balancing economic growth and environmental sustainability. P/NP or letter grading.

157. Energy, Environment, and Development. (4) Lecture, three hours. Requisites: Mathematics 3A and 3B (or 31A and 31B), Physics 1A and 1B (or 6A and 6B). Introduction to basic energy concepts and examination of role of various energy sources, energy conversion technologies, and energy policy in modern life. Analysis of economic, ecological, and political impacts of energy production and consumption for future economic and environmental well-being. Integration of concepts and methods from physical and life sciences, engineering, environmental science, economics, and public policy. Basic quantitative skills provided to analyze and critique technical, economic, and policy choices to address challenges of balancing economic growth and environmental sustainability. P/NP or letter grading.

159. Life-Cycle Analysis for Sustainability Assessment. (4) Lecture, three hours. Requisites: Mathematics 3A and 3B (or 31A and 31B), Physics 1A and 1B (or 6A and 6B). Analysis of life cycle approach to sustainable development. Focus on life cycle analysis, including the concept of life cycle assessment (LCA), and use of LCA to assess the environmental impacts of products and services. Discussion of limitations and strengths of LCA as a tool for decision making. Students perform life cycle analysis of a product, service, or technology of their choice. P/NP or letter grading.

160. Topics in Environmental Economics and Policy. (4) Seminar, three hours. Requisite: Statistics 12 or 13. Examination of intersection of environmental economics and policy, with focus on testing policy-relevant environmental hypotheses using economic research approach. Invited scholars present research aimed at yielding policy-relevant decisions on various topics such as climate change, pollution, and transportation. P/NP or letter grading.

M161. Global Environmental and World Politics. (4) [Same as Political Science M122B] Lecture, three or four hours; discussion, one hour (when scheduled). Requisite: course 120C. Examination of major international environmental issues such as climate change, population, and political science perspectives. P/NP or letter grading.

M162. Land Use and Development. (4) [Same as Urban Planning M162.] Lecture, three hours. Examination of institutional and historical evolution of land use in U.S. Comparison and contrasting of how cities have evolved in different parts of U.S. and some recent trends in urbanization. Examination of state-level land-use policies and politics and ways in which local governments plan. Environmental, social, and equity aspects of different patterns of urbanization and likely future trends. P/NP or letter grading.

163. Business and Natural Environment. (4) Lecture, three hours. Examination of role of business in mitigating environmental degradation and incentives to be more environmentally responsive. Emphasis on corporate strategies for working as stakeholders while responding to environmental concerns. P/NP or letter grading.

M164. Environmental Politics and Governance. (4) [Same as Urban Planning M160.] Lecture, three hours. Environmental planning is more than simply finding problems and fixing them. Each policy must be negotiated and implemented within multiple, complex systems of governance. Institutions and policies must be understood and environmental governance works in practice and how it might be improved. Letter grading.

M165. Nuclear Weapons: Critical Decisions. (4) [Same as Honors Collegium M119, Public Policy M116, and Political Science M139B.] Lecture, three hours. Examination of critical decisions regarding nuclear weapons, starting with President Roosevelt’s decision to build atomic bomb and ending with current debates on containing a nuclear proliferation and on avoiding nuclear catastrophe. Letter grading.

166. Leadership in Water Management. (4) Lecture, three hours; discussion, one hour. Limited to juniors/seniors. Examination of water supply, water demand, and environmental impacts of water-supply issues, including interactions between scientific, governmental, and policy issues. Invited experts, scholars, and practitioners discuss relevant issues such as pollution, climate change, and water infrastructure. Emphasis on solving problems related to integrated water supply and wastewater systems. Leadership development through writing instruction and student presentations on opportunities and challenges. P/NP or letter grading.

M167. Environmental Justice through Multiple Lenses. (4) [Same as Urban Planning M167.] Lecture, three hours. Examination of intersection between race, economic class, and environment in U.S., with focus on issues related to social justice. Because environmental inequality is highly complex phenomenon, multidisciplinary and multipopulation approach taken, using alternative ways of understanding, interpreting, and taking action. P/NP or letter grading.

170. Environmental Science Colloquium. (1) Seminar, 90 minutes; one field trip. Limited to undergraduates. Study of 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, three hours; discussion, one hour. Enforced requisite: Statistics 12 or 13. Limited to Environmental Science majors who have completed 40 or more units of preparation for major courses, including statistics, and 12 or more units of upper division courses toward major or minor requirements. Examination of case studies and presentation of tools and methodologies in environmental science, building on what students have been exposed to in other courses. Letter grading.

180B-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 junior/senior Environmental Science majors. Investigation of various aspects of one environmental case study presenting actual multidisciplinary issue. Particular emphasis on developing skills required for professional in this field. Work may involve site investigations, original data collection and analysis, mapping and geographic information systems, and environmental policy and land use issues. Course content 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. Recommended for students who believe that late 1970s provide oceanographers with large volume
of information on state of surface of world ocean, including sea surface temperature measured by infrared sensors, cloudiness measured by scatterometers, and water color properties measured by optical sensors. Multidisciplinary information enables comprehensive monitoring of both physical and biological properties of ecosystems in different ocean regions. P/N or letter grading.

185A. Education for Sustainable Living Program Speaker Series. (1) 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 sustainability, including energy efficiency, transportation, waste stream management, sustainable food practices, and more to generate coalition of student researchers that, together with faculty members and UCLA staff, strive to make UCLA more sustainable community. May be repeated for credit. Letter grading.

186. Comparative Sustainability Practices in Local/Global Settings. (4) 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, political, and environmental 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. (4-2) (Formerly numbered 188.) Lecture, three hours (course 188A) and two hours (course 188B). 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.

193. Journal Club Seminars: Environment. (1) Seminar, one hour. Limited to undergraduate students. Discussion of readings selected from current literature of field. May be repeated for credit. P/NP grading.

195. Community or Corporate Internships in Environmental Science. (2 or 4) Tutorial. To be arranged. Preparation: 3.0 grade-point average in major. Limited to junior/senior majors. Internship in supervised setting in community agency or business related to environmental science and/or sustainability. Students meet on regular basis with faculty supervisor and provide periodic reports of their experience. May be repeated for credit for maximum of 8 units. Individual contract with supervising faculty member required; consult under-graduate adviser. P/NP grading.

198. Honors Research in Environmental Science. (2 to 4) Tutorial, four hours. 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 a total of at least 8 units. May be repeated for credit. Individual contract required. Letter grading.

199. Directed Research in Environment. (2 to 4) Tutorial, two hours. Preparation: submission of written proposal outlining study or research to be undertaken. Limited to juniors/seniors. Supervised individual research or investigation under guidance of faculty mentor. Progress report must be submitted to faculty mentor at end of term. Culminating paper or project required. May be repeated for credit, but only 4 units may be taken each term. Individual contract required. P/NP or letter grading.

Graduate Courses

277. Leaders in Sustainability. (4) (Formerly numbered Environmental Science and Engineering 277.) Lecture, three hours. Common course for all students participating in Leaders in Sustainability Program, including those from engineering, law, management, public affairs, public health, natural and social sciences, and others. Creation of environment for academically based discussions on various sustainability-related themes, capitalizing on wide mix of disciplines represented among participating students. Sessions feature UCLA faculty members, external speakers, and leadership skills to help students learn more about how to best put their interests in sustainability to use. Letter grading.

297A-297B. Advanced Topics in Environment and Sustainability. (4-2) Seminar, four hours (course 297A) and two hours (course 297B). Advanced study and analysis of variable current topics in environment and sustainability. Consult Schedule of Classes for topics and instructors. May be repeated for credit with consent of instructor. S/U or letter grading.

375. Teaching Apprentice Practicum. (1 to 4) Seminar, to be arranged. Preparation: apprentice personnel employment as teaching assistant, associate, or fellow. Teaching 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. Environmental Science and Engineering Problems Course. (8) (Formerly numbered Environment 400A.) Seminar, eight hours. Primarily designed for environmental science and engineering doctoral students. Multidisciplinary technical and socio-economic analysis and promotion of significant current environmental problems. May be repeated for credit. S/U grading.

410A-410B-410C. Environmental Science and Engineering Workshops. (2-2-2) (Formerly numbered Environmental Science and Engineering 410A-410B-410C.) Seminar, two hours. Primarily designed for environmental science and engineering doctoral students who are conducting problems courses. Development of multidisciplinary skills essential to solution of environmental problems studied within courses 400A through 400D. Development of presentation skills. S/U grading.

M412. Effective Technical Writing. (2) (Formerly numbered Environmental Science and Engineering M412.) (Same as Environmental Health Sciences M412.) Lecture, one hour. Essentials of grammar, punctuation, syntax, organization, and format needed to produce well-written journal articles, research reports, memoranda, letters, and resumes. Emphasis on accuracy, clarity, conciseness, and avoidance of common errors in advanced technical writing, using critique, exercises, and examples. S/U grading.

501. Cooperative Program. (2 to 8) (Formerly numbered Environmental Science and Engineering 501.) 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.


599. Doctoral Dissertation Research. (2 to 12) Tutorial, to be arranged. Limited to students who have advanced to doctoral candidacy. May not be applied toward any degree course requirements. May be repeated for credit. S/U grading.

INTEGRATIVE BIOLOGY AND PHYSIOLOGY

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Walter H. Metzner, Ph.D., Vice Chair

Patricia E. Phelps, Vice Chair

Professors

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Gene D. Block, Ph.D., Chancellor

Scott H. Chandler, Ph.D.

V. Reggie Edgerton, Ph.D.

Gordon L. Fain, Ph.D.

Alan Garfinikel, Ph.D.

David L. Glanzman, Ph.D.

Fernando Gómez-Pinilla, Ph.D., in Residence

Alan D. Grinnell, Ph.D.

Walter H. Metzner, Ph.D.

Peter M. Narins, Ph.D.

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James G. Tidball, Ph.D.

Professors Emeriti

R. James Barnard, Ph.D.

Camille Brown, Ed.D.

Bryant J. Cratty, Ed.D.

Glen H. Egstrom, Ph.D.

Gerald W. Gardner, Ph.D.

Margaret E. Haberland, Ph.D.

Valerie V. Hunt, Ed.D.

Jack F. Keogh, Ed.D.

Marjorie E. Latchaw, Ph.D.

Wayne W. Massey, Ph.D.

Judith L. Smith, Ph.D.

Ben W. Miller, Ph.D.

Allan J. Tobin, Ph.D. (Eleanor I. Leslie Professor Emeritus of Neuroscience)

Associate Professors

Rachelle H. Crosbie, Ph.D.

Mark A. Frye, Ph.D.

David W. Walker, Ph.D.

Stephanie A. White, Ph.D.

Assistant Professors

Amy C. Rowat, Ph.D.

Xia Yang, Ph.D.

Xinshu Grace Xiao, Ph.D.

Adjunct Professors

Larry Faller, Ph.D.

William C. Whiting, Ph.D.

Adjunct Associate Professor

Tama W. Hassan, Ph.D.

Adjunct Assistant Professor

Anthony R. Friscia, Ph.D.
Transfer applicants to the Physiological Science major. After successful completion of the courses and a grade-point average of 2.5 or better in all upper division courses taken for a letter grade, and a C average must be maintained in all upper division courses. Each required and elective course must be taken for a letter grade, and a C average must be maintained in all upper division courses. 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 198HC, 191H, 192, 193, 195, 196, 198A and 198B, for students in the department. Preparation for the 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, or 6AH, 6BH, and 6CH.

To enter the Physiological Science major, students must complete Chemistry and Biochemistry 14A, 14B, and 14C, or 20A, 20B, and 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 denial 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, and 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.

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/admit_jr.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 198HC and 199B, 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. 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 advisor, 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://grad.ucla.edu/gasaa/library/pgmqrintro.htm. In many cases, more detailed guidelines may be outlined in course 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.
tional basis of biomedical instrumentation (dialysis, artificial skin, pathogen detectors, ultrasound, birth control devices), concurrently scheduled with course CM203. Letter grading.

107. Systems Anatomy. (5) Lecture, four hours; laboratory, three hours; tutorial, two hours. Requisites: Life Sciences 2, Physics 1A or 6A. Students must receive grade of C or better to proceed to next course in series. Systems anatomy focused primarily on human anatomy. Topics include cardiovascular, respiratory, reproductive, nervous, and skeletal systems, with introduction to biomechanical principles. Letter grading.

108. Head and Neck Anatomy: Evolutionary, Biomechanical, Developmental, and Clinical Approach. (4) Seminar, 90 minutes; laboratory, 90 minutes. Requisite: course 107. Strongly recommended course 153. Introduction to head and neck anatomy. Dissection of head and neck, with focus on vasculature, innervation, and musculature to put them in three-dimensional context. The course introduces developmental, physiological, and biomechanical aspects of skull, including comparative anatomy of other vertebrate skulls, dental evolution and mechanics, respiratory, and cranial and orofacial developmental origins of head structures. Letter grading.

111A-111B. Foundations in Physiological Science. (6-6) Lecture, four hours; discussion, two hours. Letter grading. Course 107, Anatomical course 107 or Chemistry 14C or 30A, Life Sciences 1, 2, 3, 4, 23L, Physics 1B or 6B or 6CH, Students must receive grade of C or better to proceed to next course in series. Introduction to principles of muscular and neural physiology, including facets controlling membrane excitability, neural 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 systems. Letter grading.

111L. Physiological Science Laboratory. (Lab) Lecture, 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 1, 2, 3, 4. Discussion of new theories of normal 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. Discussion of the highly complex and profound relationship between underlying aging processes 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. Students will be encouraged to explore molecular biology, emerging bioinformatic approaches, and systems modeling integrated with discussions of their applications in disease-related research. Review of recent literature, perspectives about new science of systems biology. Letter grading.

126. Biological Clocks. (4) Lecture, three hours; discussion, one hour. Requisites: courses 111A and 111B, or M180A and M180B. Most organisms, including humans, exhibit daily rhythms in physiology and behavior. In many cases these rhythms are generated from within organisms and are called circadian rhythms. Biological basis of these daily rhythms or circadian oscillations. Exploration of molecular, cellular, and 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 C202. Letter grading.

133. Exercise Physiology. (5) Lecture, three hours; laboratory, two hours. Requisite: course 111B. Physiological responses and adaptations to acute and chronic exercise. Letter grading.


135. Dynamical Systems Modeling of Physiological Processes. (5) Lecture, four hours; laboratory, two hours. Examination of art of making and evaluating dynamical models of physiological systems and of dynamical principles inherent in physiological systems. Letter grading.


143. Neurobiology of Skilled Hand Function. (4) Lecture, three hours. Enforced requisite: course 111A or Neuroscience M101A. Structure and function of hand and how brain and spinal cord control its movement. Analysis of causes leading to hand impairment after different insults to nervous system. Exploration of therapy to promote plasticity in nervous system to regain normal hand function. Letter grading.

144. Neural Control of Physiological Systems. (5) Lecture, four hours. Requisites: course 111B or M180B. Role of central nervous system in control of respiratory, circulatory, and bladder control. Material for each section to be developed by combination of lecture and open discussion. Concurrently scheduled with course C244. Letter grading.

M145. 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 complex movements such as locomotion, mastication, and swallowing. Letter grading.

146. Principles of Nervous System Development. (4) Lecture, three hours; discussion, 90 minutes. Requisites: courses 102 and 111A or M180A, Molecular, Cell, and Developmental Biology M175A, Neuroscience M101A, or Psychology M117A. Examination of construction of vertebrate nervous system as series of integrated steps beginning with several embryonic cells and culminating as complex highly ordered system. Topics include neurogenesis, neuron migration, and axonal outgrowth, and synapse formation. 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 specific neuronal circuits in auditory pathway, basal ganglia, cerebellum, hippocampus, and neocortex. 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 developments of these diseases presented in terms of changes in cell biology and function, and changes in regulation of intercellular interactions. Letter grading.


153. 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. Limited to juniors/seniors. Signal transduction concepts, with focus on role of receptors, G proteins, and intracellular messengers such as cysolic AMP and calcium. Integration of these concepts with variety of physiological processes, including stimulus-secretion coupling, vascular smooth muscle contraction, and role of growth factors in cell proliferation. Contemporaneous research analysis of matr material presented. Students required to present journal article for discussion. Letter grading.

155. Development and Structure of Musculoskeletal System. (4) Requisites: course 102, 111B, Anatomy, histology, cell biology and biochemistry of musculoskeletal soft tissues. Integration of knowledge of muscle and connective tissue structure and function on each of these levels to understand organism and physiological behavior of the intact system.

156. Molecular Mechanisms and Therapies for Muscular Dystrophy. (4) Lecture, three hours; discussion, one hour. Enforced requisites: course 111A (may be taken concurrently), Life Sciences 4 with grade of B or better. Causes and pathogenesis of Duchenne muscular dystrophy and some fundamental findings using animal models. Exploration of therapies aimed at individual stages of pathogenic disease as method to develop critical expert-like thinking skills. Lectures based on experimental information from primary scientific literature, and students expected to understand genetic and phenotypic animal models of muscular dystrophy, to design experiments, and to predict outcomes from research data. Letter grading.

157. Comparative Animal Physiology. (4) Lecture, three hours; discussion, one hour. Requisites: Life Sciences 1, 2, 3, 23L. Physiological response and function at molecular, cellular, systemic, and whole organism levels of variety of environmental conditions. Major topics include neural and muscular structure and function, hormones, gam ex-
change, energetics, and thermoregulation. Examination of wide variety of vertebrates and invertebrates to understand how such species of organisms respond to physical en-
vironment. Letter grading.

166. Animal Physiology. (6) Lecture; three hours; laboratory; five hours. Requisites: Chemistry 14B and 14BL, or 20B and 20AL, 153A, Life Sciences 1, 2, 23L, 34L, 85B, or 86B. Open to credit to students with credit for Ecology and Evolutionary Biology 170 or to Physiological Science majors. Introduction to physiological principles, with emph-
phasis on organ systems and intact organisms. Letter grading.

167. Physiology of Nutrition. (4) Lecture, four hours. Limited to senior Physiological Science majors. Top-
ics include physiological adaptation to starvation and physiological aspects of weight gain; fat, choles-
terol, minerals, vitamins, and their relationship to chronic diseases and physiology of fuel utilization during aerobic and anaerobic exercise. Letter grading.

M166. Ideas and Experiments in History of Physiology. (4) (Same as Neurobiology M168.) Lecture, three hours. Three-lecture exercises will explore different issues in the history of physiology, such as the development of certain apparatuses, the influence of political ideologies, and the role of new scientific techniques in physiology.

170A. Physical Properties of Animal Signals. (4) (Same as Molecular, Cell, and Developmental Biology M175A and M175B. Structure and function of sensory organs. Adoption of quantitative and comparative approach to provide insight into evolutionary functional aspects in both invertebrates and vertebrates. Letter grading.

175. Why Fido Can't Speak: Biological Evolution of Language. (4) Lecture, three hours; discussion, one hour. Requi-
sites: course 111A or M180A, or Molecular, Cell, and Developmental Biology M175A and M175B. Structure and function of sensory organs. Adoption of quantitative and comparative approach to provide insight into evolutionary functional aspects in both invertebrates and vertebrates. Letter grading.

178. Neuroethology. (5) Lecture, four hours; discussion, two hours. Requisite: course 111A or M180A. Physical properties of animal signals and physiological mechanisms underlying their generation. Additional topics include classical neuroethological models: acoustic and vibrational communication in vertebrates, social behavior in birds, non-human primates, and behavior during play. Letter grading.

181. Biological Bases of Psychiatric Disorders. (4) (Same as Molecular, Cell, and Developmental Bi-
ology M181, Neuroscience M130, Psychiatry M181, and Psychology M171J.) Lecture, three hours. Requi-
site: course 111A or M180A (or Molecular, Cell, and Developmental Biology M175A or Neuroscience M101A or Psychology M117A or Psychology M117A or Psychology M117A). Underlying brain systems involved in psychiatric symptoms and neurological disorders, including schizophrenia, 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.

180-181. Research Seminars: Physiology. (1) Seminar, one hour. Requisite: course 111A. Focused reading in single discipline of physiology, with focus on primary research literature. Emphasis on understanding methods for research in physiology and interpretation of experimen-
tal results, and how they bear on concepts of physiology. Development of culminating paper. P/NP or letter grading.

181H. Honors Seminars: Current Topics in Physiology. (4) Seminar, four hours. Requisites or corequi-
sites: courses 198A, 198B. Limited to neuroscience and physiological science honors program students. Designed for juniors/seniors and required of depart-
mental honors students. Presentation of primary pa-
per from physiology literature. Reading and critical evaluation of the literature. Presentation of student laboratory research hypothesis, approach, and results in form of oral and poster presentations. Letter grading.

182. Practicum in Systems Anatomy for Under-
graduate Assistants. (3) Seminar, two hours; addi-
tional hours in laboratory setting, to be arranged. Requisite: course 107. Limited to juniors/seniors. Training and supervised practicum in systems anato-
my for undergraduate assistants. Consult Undergrad-
uate Office for further information. May not be applied toward elective requirements and may not be repeat-
ed for credit. Departmental application required. P/NP or letter grading.

183. Journal Club Seminars: Physiological Sci-
cence. (1) Seminar, one hour. Limited to undergradu-
ate students. Discussion of readings selected from current literature in field. May be repeated for credit. P/NP grading.

184A. Research Group Seminars: Physiological Sci-
cence. (2) Formerly numbered 194.) Seminar, two hours. Required of undergraduate students in re-
search traineeships such as MARC and UG Leads programs. Discussion of research methods and cur-
rent literature in field or of research of faculty mem-
ers or students. May be repeated for credit. Letter grading.

184B. Research Group Seminars: Physiological Sci-
cence. (1) Seminar, two hours. Corequisite: course 198A or 198B or 198C or 199. Limited to juniors/se-
niors. Involvement in weekly laboratory research group meetings to encourage student participation in research and to stimulate progress in specific re-
search areas. Discussion of use of specific research

Graduate Courses

M200. Advanced Experimental Statistics. (4) (Same as Biostatistics M220.) Lecture, four hours. In-
troduction to statistics with focus on computer simu-
lation instead of formula. Bootstrap Monte Carlo methods used to analyze physiological data. S/U or letter grading.

M202. Cellular Neurophysiology. (4) (Same as Neu-
robiology M203F and Neuroscience M202.) Lecture, three hours; discussion, two hours. Requisites: course 111A (or M180A or Physics 6B), 166. Ad-
vanced course in cellular physiology of neurons. Ac-
tion potentials and membrane potentials, synaptic blockers, gates, ion pumps and neuronal homeosta-
sis, synaptic receptors, drug-receptor interactions, neurotransmitter release, modulation by second messenger, and sensory transduction.

CM203. Basic Human Biology for Bioengineers II. (4) (Same as Bioengineering CM203.) Lecture, three hours; laboratory, two hours. Preparation: human mo-
lecular biology, biochemistry, and cell biology. Not

Integrative Biology and Physiology / 423
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 as teaching assistant, associate, or fellow. Teaching apprenticeship under active guidance and supervision of regular faculty member responsible for curriculum and instruction at UCLA. May be repeated for credit. S/U grading.

495. In-Service Practicum for Teaching Assistants in Physiological Science. (2) Seminar, to be arranged. Required of all teaching assistants. Supervised practicum in teaching laboratory courses in physiological science; material preparation and use of teaching aids. May not be applied toward degree requirements. S/U grading.

501. Cooperative Program. (2 to 8) Preparation: consent of UCLA graduate 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 596 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 AND AREA STUDIES
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College of Letters and Science

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Namhee Lee, Ph.D. (Asian Languages and Cultures)
Ghislaine E. Lydon, Ph.D. (History)
Adam D. Moore, Ph.D. (Geography)
Helen M. Rees, Ph.D. (Ethnomusicology)
Bonnie Taub, Ph.D. (Community Health Sciences, Health Policy and Management)
Kevin B. Terraciano, Ph.D. (History)

Michael F. Thies, Ph.D. (Political Science)

Scope and Objectives
The International and Area Studies majors provide students with a broad understanding of the international nature of the world and guide them through a course of study that allows them to apply that knowledge to a particular region of interest. The majors are structured so that area-specific content proceeds in tandem with instruction in the humanities and social sciences disciplines that provide the tools for analyzing the cultures, social structures, policies, and histories of the regional areas.

Emphasizing the contemporary world since 1750, the majors establish a common conceptual and thematic basis for study of regional areas. Students take a common core course that illuminates the international character of the contemporary world and introduces a set of contemporary issues and challenges that cross borders and regions. Thematic and conceptual courses equip students with a variety of disciplinary tools they can use to study a particular area or region. Studies culminate in a capstone seminar.

Undergraduate Study

Students considering a major or minor in the interdepartmental program should consult the academic counselor 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 academic counselor.

The majors offered in International and Area Studies are designated capstone majors. Students majoring in African and Middle Eastern Studies, Asian Studies, European Studies, and Latin American Studies must complete a capstone seminar or travel abroad program in which they engage in an in-depth analysis of a specific region or a thematic subject that spans regions. Through conceiving and executing a project, students demonstrate their working knowledge of scholarly discourse relative to a specialized topic. Student research, analytic, and writing skills are exhibited through their capstone work, along with their collaborative and oral communication skills.

African and Middle Eastern Studies B.A.

Capstone Major
The African and Middle Eastern Studies major allows students to analyze the area or a subregion (e.g., Middle east, North Africa, Arab states, sub-Saharan Africa) from an interdisciplinary and modern perspective. The major seeks to ground students in broad international issues that they can then use to focus on particular concerns of that part of the world.

Admission
Admission to the African and Middle Eastern Studies major is by application only. To be eligible to apply, students must have completed all nonlanguage preparation for the major 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 minimum requirements does not guarantee admission to the program. Admission is on a competitive basis, using the above qualifications as minimum standards for consideration.

African and Middle Eastern Studies Premajor
Incoming freshman and transfer students may be admitted as African and Middle Eastern Studies premajors on acceptance to UCLA. Premajors must apply for major standing at the end of Fall Quarter of their junior year; they are not automatically accepted into the major.

Preparation for the Major
Required: (1) International and Area Studies 1, 2 one area studies course from Afrikaans 40, Art History 55A, History 9D, 10B, 97F, 97J, Honors: Collegium 10, 24, Middle Eastern Studies 50C, Portuguese 40A, or Theater 4, (3) two international politics and markets courses from Economics 1, 2, Geography 4, 6, Political Science 50 (or 50R), Sociology 1, (4) two international societies and cultures courses from Anthropology 9, Comparative Literature 1D (or 2DW or 4DW), Ethnomusicology 5, 25, Geography 3, History 2B, 22, World Arts and Cultures 20, 33, and (5) one area-related foreign language sequence through the intermediate level (e.g., African Languages 2C, 8C, 12C, 16, 18, 26, 32C, 36, 42C, 46, 62C, Arabic 102C, Armenian 102C, 105C, Berber 102C, Hebrew 102C, Iranian 102C, Turkic Languages 102C, 112C, 116C). The language requirement can also be fulfilled in part or in total by taking a placement examination given through the appropriate language department. Each course must be taken for a letter grade.

Transfer Students
Transfer applicants to the African and Middle Eastern Studies premajor with 90 or more units must complete the following introductory courses prior to admission to UCLA: two courses from sociocultural anthropology, cultural geography, contemporary world history,
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and world literature and two courses from
comparative politics, economic geography,
macroeconomics, microeconomics, and introductory sociology. Transfer students must apply for the major by the end of Fall Quarter of
their junior year.
Refer to the UCLA Transfer Admission Guide 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 International and Area
Studies 191 (capstone seminar) and 11 upper
division courses divided among area studies
and international themes courses. To count as
one 4-unit course, 2-unit courses must either
be taken twice or two courses from the same
category (if applicable) may be taken. Each
course must be taken for a letter grade, with a
minimum overall grade-point average of 2.0.
Area Studies: (1) Three humanities and arts
group 1 courses from African Languages
150A, 150B, 170, 171, 172, Afrikaans 135, Arabic M110, 120, C141, M151, Armenian 150A,
169, Ethnomusicology 136A, C136B, 161E (2
units), 161L (2 units), 161N (2 units), French
121, 142, Hebrew M113, C140, Iranian 141,
142, 150A, 150B, Islamics 151, Jewish Studies
142, 144, 151B, 175, M182F, M182G, Turkic
Languages 160, 165, 180, World Arts and Cultures 134, 135; (2) three social sciences group
1 courses from Anthropology 133P, 171,
M171P, 176, Geography 122, 135, 187, History
through 164E, 166B, 166C, 167A, 167B, 167C,
168B, M184D, Honors Collegium 123, M157,
Political Science 132A, 133, 151A, 151B,
151C, 157, 165; and (3) one additional elective
course selected from either item 1 or 2 above.
International Themes: (1) Two international politics and markets courses from Anthropology
153P, Economics 111, 112, 121, 122, Environment 122, M134, Geography M128, 140, 148,
International Development Studies 150, Management 109, 127C, Political Science 120B,
122A, M122B, 123A, 123B, 124A, 124B, 125A,
126, 129, 134, 137A, 137B, 138B, 150, 166,
167A, M167C, 167D, 168, Sociology 182, 183,
Urban Planning M165 and (2) two international
societies and cultures courses from Anthropology 130, 150, 152, 153, 161, 167, Art History
C180A, Communication Studies 122, 179,
Comparative Literature 100, C173, Environment M133, Film and Television 110C, 112,
Geography M109, 110, 121, 133, 138, 142,
147, 151, 159C, History M187B, Honors Collegium M152, International Development Studies 100A, Sociology 116, 151, 154, 184, 191D,
191F, World Arts and Cultures M130.
The area studies electives listed above (group
1) focus on contemporary issues of that region
after 1750. Students may substitute a maximum of three upper division courses with focus on earlier historical aspects of the region

or on diasporas with origins related to the region toward the area studies electives as long
the distribution between humanities and arts
and social sciences is maintained. They may
be selected from either of the following lists:
humanities and arts group 2: Ancient Near
East 124, M130, 150B, C165, Arabic 130, 132,
150, Armenian 130, 131, C155, Art History
130, 135, Iranian M110A, M110B, M110C,
120, 131, 140, Islamics M110, 130, Jewish
Studies 140A, 140B, 141, 143, M150A, 150B,
M151A, M155, M182A, M182B, M182C,
M182E, M184B, Turkic Languages 170, World
Arts and Cultures C139 or social sciences
group 2: Geography 114, History M103A,
M103B, 105A, 105B, M106A, 107A, 107D,
M164A, 166A, 168A.

Asian Studies B.A.
Capstone Major
The Asian Studies major allows students to
analyze the area or a subregion (e.g., Central
Asia, East Asia, South Asia, Southeast Asia)
from an interdisciplinary and modern perspective. The major seeks to ground students in
broad international issues that they can then
use to focus on particular concerns of that part
of the world.

Admission
Admission to the Asian Studies major is by application only. To be eligible to apply, students
must have completed all nonlanguage preparation for the major 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 minimum requirements
does not guarantee admission to the program.
Admission is on a competitive basis, using the
above qualifications as minimum standards for
consideration.

Asian Studies Premajor
Incoming freshman and transfer students may
be admitted as Asian Studies premajors on acceptance to UCLA. Premajor students must
apply for major standing at the end of Fall
Quarter of their junior year; they are not automatically accepted into the major.

Preparation for the Major
Required: (1) International and Area Studies 1,
(2) one area studies course from Art History
56A, 56B, Asian 70A, 70B, 70C, Chinese 50 (or
50W), M60 (or M60W), General Education
Clusters 25A, History 9A, 9C, 9E, 11B (or
11BH), 97G, 97M, 97N, International and Area
Studies 31, 33, Japanese 50, 70, Korean 50,

M60, South Asian M60, Southeast Asian M60,
or 90, (3) two international politics and markets
courses from Economics 1, 2, Geography 4, 6,
Political Science 50 (or 50R), Sociology 1, (4)
two international societies and cultures
courses from Anthropology 9, Comparative
Literature 1D (or 2DW or 4DW), Ethnomusicology 5, 25, Geography 3, History 2B, 22, World
Arts and Cultures 20, 33, and (5) one area-related foreign language sequence through the
intermediate level (e.g., Chinese 6 or 6A, Filipino 6, Hindi-Urdu 6, Indonesian 6, Japanese
6, Korean 6, Thai 6, Vietnamese 6). The language requirement can also be fulfilled in part
or in total by taking a placement examination
given through the appropriate language department. Each course must be taken for a letter grade.
Transfer Students
Transfer applicants to the Asian Studies
premajor with 90 or more units must complete
the following introductory courses prior to admission to UCLA: two courses from sociocultural anthropology, cultural geography, contemporary world history, and world literature
and two courses from comparative politics,
economic geography, macroeconomics, microeconomics, and introductory sociology.
Transfer students must apply for the major by
the end of Fall Quarter of their junior year.
Refer to the UCLA Transfer Admission Guide 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 International and Area
Studies 191 (capstone seminar) and 11 upper
division courses divided among area studies
and international themes courses. To count as
one 4-unit course, 2-unit courses must either
be taken twice or two courses from the same
category (if applicable) may be taken. Each
course must be taken for a letter grade, with a
minimum overall grade-point average of 2.0.
Area Studies: (1) Three humanities and arts
group 1 courses from Art History C115A,
C115B, C115C, C115G, 180C, Asian 120, 130,
151, 152, 161, 162, 163, Chinese 120, 130A,
130B, 135, 139, C150A, 150B, 151, 152, 154,
155, C156, 157, CM160, 165, 174, 176, 180,
185, 191B, Comparative Literature M176,
C178, Ethnomusicology 146, 147, C150,
C156A, 156B, 157, 158A, 158B, 158C, C159,
160, 161B (2 units), 161D (2 units), 161F (2
units), Japanese C112, 130A, 130B, 130C,
C131, C150, 151, 154, 155, 157, 158, CM160,
161, 170, 175, C177, C182, C186, 191B, Korean C105A, C105B, C105C, 130A, 130B,
C149, C151, 154, 155, CM160, 172, 177, 178,
180C, 181, 182, 183, 187, 191B, South Asian
150, 155, Southeast Asian 130, 135, 140, 157,
Theater 102A, 102B, Vietnamese M155, 180B;
(2) three social sciences group 1 courses from
Anthropology M155, 175Q through 175Y,
Asian American Studies 171A through 171E,
M172C, Gender Studies M164A, M170C,
M173B, Geography 139, 158, 185, 186, History 170B, 170D, 172C, M173C, 174C, 175A,


Admission to the European Studies major is by premajor with 90 or more units must complete the distribution between humanities and arts courses. To count as one additional elective course selected from either item 1 or 2 above. Transfer applicants to the European Studies program must apply for major standing at the end of Fall Quarter of their junior year; they are not automatically accepted into the major. Each preparation for the major course must be taken for a grade-point average of 2.0 or better in those courses. Transfer students must apply for the major by maximum overall grade-point average of 2.0. Students may substitute a maximum of three upper division courses with focus on earlier historical aspects of the region or on diasporas with origins related to the region toward the area studies electives as long the area studies electives listed above (group 1) focus on contemporary issues of that region after 1750. Students may substitute a maximum of three upper division courses with focus on earlier historical aspects of the region or on diasporas with origins related to the region toward the area studies electives as long the distribution between humanities and arts courses is maintained. They may be selected from either of the following lists: humanities and arts group 2: Art History 114A, 114C through 114G, C115D, C115E, C115F, C140A, C140B, C140C, Asian 164, Chinese C138, 140A through 140D, M153, C175, 182, M183, 184, 186, 191A, Comparative Literature M168, Japanese 140A, 140B, 140C, C149, 165, 172, C173, 191A, Korean 150, 157, 176, 180A, 180B, 184A, 191A, South Asian CM160, 185, Vietnamese 180A or social sciences group 2: Anthropology 116, 116N, 116P, Asian American Studies 111, 113, 121, 122B, 130A, M130C, 131A, 131B, 131C, 132A, 133, 134, History 152, 169A, 170A, 172A, 172B, 174A, M174D, M175B, 176A, 176D.

European Studies B.A.

Capstone Major

The European Studies major allows students to analyze the area or a subregion (e.g., Central and Eastern Europe, Mediterranean Europe, Scandinavia, Western Europe/European Union) from an interdisciplinary and modern perspective. The major seeks to ground students in broad international issues that they can then use to focus on particular concerns of that part of the world.

Admission

Admission to the European Studies major is by application only. To be eligible to apply, students must have completed all nonlanguage preparation for the major 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 minimum requirements does not guarantee admission to the program. Admission is on a competitive basis, using the above qualifications as minimum standards for consideration.

European Studies Premajor

Incoming freshman and transfer students may be admitted as European Studies premajors on acceptance to UCLA. Premajor students must apply for major standing at the end of Fall Quarter of their junior year; they are not automatically accepted into the major.

Preparation for the Major

Required: (1) International and Area Studies 1, (2) one area studies course from Central and East European Studies 91, Comparative Literature 1C, 2WC, 4CW, Dutch 10, English 85G, French 12, 14 or (14W), 41, 60, German 50B, 57, 59, 61A through 61D, 62W, History 1C (or 1CH), 97C, International and Area Studies 40, Italian 42B, 46, 50B, Portuguese 40A, Romanian 90, Russian 25 (or 25W), 30, 31, 32, 90B (or 90BW), Scandinavian 50 (or 50W), Slavic 88, 90, Spanish 42, (3) two international politics and markets courses from Economics 1, 2, Geography 4, 6, Political Science 50 (or 50R), Sociology 1, 4, (2) international societies and cultures courses from Anthropology 9, Comparative Literature 1D (or 2D or 4W), Ethnomusicology 5, 25, Geography 3, History 2B, 22, World Arts and Cultures 20, 33, and (5) one area-related foreign language sequence through the intermediate level (e.g., Czech 102C, Dutch 103C, French 6, German 8, Hungarian 102C, Italian 6, Polish 102C, Portuguese 3, Romanian 102C, Russian 6, Scandinavian 5, 15, 25, 29, Serbian/Croatian 102C, Spanish 5, Ukrainian 102C, Yiddish 102C). The language requirement can also be fulfilled in part or in total by taking a placement examination given through the appropriate language department. Each course must be taken for a letter grade.

Transfer Students

Transfer applicants to the European Studies premajor with 90 or more units must complete the following introductory courses prior to admission to UCLA: two courses from sociocultural anthropology, cultural geography, contemporary world history; and world literature and two courses from comparative politics, economic geography, macroeconomics, microeconomics, and introductory sociology. Transfer students must apply for the major by the end of Fall Quarter of their junior year.

Refer to the UCLA Transfer Admission Guide at http://www.admissions.ucla.edu/prospect/adm...
Latin American Studies B.A.  

Capstone Major  
The Latin American Studies major allows students to analyze the area or a subregion (e.g., Amazonia, Caribbean, Central America, South America, Southern Cone) from an interdisciplinary and modern perspective. The major seeks to ground students in broad international issues that they can then use to focus on particular concerns of that part of the world.  

Admission  
Admission to the Latin American Studies major is by application only. To be eligible to apply, students must have completed all nonlanguage preparation for the major 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 minimum requirements does not guarantee admission to the program. Admission is on a competitive basis, using the above qualifications as minimum standards for consideration.  

Latin American Studies Premajor  
Incoming freshman and transfer students may be admitted as Latin American Studies premajors on acceptance to UCLA. Premajor students must apply for major standing at the end of Fall Quarter of their junior year; they are not automatically accepted into the major.  

Preparation for the Major  
**Required:**  
(1) International and Area Studies 1,  
(2) one area studies course from History 8A or 8AH,  
8B, 8C, 97E, International and Area Studies 50, Portuguese 40B, 46, Spanish 44,  
(3) two international politics and markets courses from Economics 1, 2, Geography 4, 6, Political Science 50 (or 50R), Sociology 1,  
(4) two International societies and cultures courses from Anthropology 9, Comparative Literature 1D (or 2DW or 4DW), Ethnomusicology 5, 25, Geography 3, History 2B, 22, World Arts and Cultures 20, 33, and  
(5) two area-related foreign language sequences through the intermediate level (e.g., Portuguese 3 or 11B, Spanish 5 or 7, an indigenous language of Latin America such as Nahua, Quechua, or Zapotec, through that level). The language requirement can also be fulfilled in part or in total by taking a placement examination given through the appropriate language department. Each course must be taken for a letter grade.  

**Transfer Students**  
Transfer applicants to the Latin American Studies premajor with 90 or more units must complete the following introductory courses prior to admission to UCLA: two courses from sociocultural anthropology, cultural geography, contemporary world history, and world literature and two courses from comparative politics, economic geography, macroeconomics, and introductory sociology. Transfer students must apply for the major by the end of Fall Quarter of their junior year.  

Refer to the UCLA Transfer Admission Guide 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 International and Area Studies 191 (capstone seminar) and 11 upper division courses divided among area studies and international themes courses. To count as one 4-unit course, 2-unit courses must either be taken twice or two courses from the same category (if applicable) may be taken. Each course must be taken for a letter grade, with a minimum overall grade-point average of 2.0.  

**Area Studies:**  

**International Themes:**  

The area studies electives listed above (group 1) focus on contemporary issues of that region after 1750. Students may substitute a maximum of three upper division courses with focus on earlier historical aspects of the region or on diasporas with origins related to the region toward the area studies electives as long as the distribution between humanities and arts and social sciences is maintained. They may be selected from either of the following lists: humanities and arts group 2: Art History C117A through 117E, Chicana and Chicano Studies M105D, M105E, 109, 142, Ethnomusicology M116, Portuguese 143A or social sciences group 2: Anthropology 114P through 114T, Chicana and Chicano Studies M119, M159B, 184, M187, History 157B.  

Honors Program  
The honors program is designed to offer highly motivated students pursuing one of the International and Area Studies majors (African and Middle Eastern Studies, Asian Studies, European Studies, Latin American Studies) the opportunity to design and conduct their own independent research under the guidance of a faculty adviser and consists of a three-term directed-study series of courses — International and Area Studies 198A, 198B, 198C — culminating in an honors thesis.  

Admission  
To enter the honors program, students must (1) have completed all preparation for the major requirements with a minimum 3.5 grade-point average in those courses, (2) have a 3.5 grade-point average in all upper division coursework for the major, (3) obtain agreement from a faculty member to supervise their honors thesis, and (4) formally submit an application to the honors program. Application should normally be made during the junior year so as to best plan for completion of the honors thesis during the senior year. Consult the academic counselor for further details about the application, thesis requirements, and guidelines regarding the selection of a faculty thesis adviser.  

Requirements  
Honors are awarded to students who (1) complete all requirements for the major with a cumulative grade-point average of 3.5 or better in upper division courses required for the major, (2) successfully complete courses 198A, 198B, and 198C, and (3) produce an honors thesis (approximately 35 to 50 pages) determined to be of honors quality by a committee of two faculty members — the chair of International and Area Studies and the faculty adviser of the student.  

Highest honors are awarded to students who (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, (2) successfully complete courses...
African and Middle Eastern Studies Minor

The African and Middle Eastern Studies minor allows students to select from a broad range of courses in various departments to develop professional and methodological skills with area expertise. The minor enables students with an interest in the region to add dimension to their programs.

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 9D and one course selected from Anthropology 8, 9, Comparative Literature 1A, 1B, 1C, 1D, Economics 1, 2, Ethnomusicology 20B, 21L, 91N, Geography 3, History 20, 21, 22, Middle Eastern Studies 50A, M50B, 50C, Political Science 20, 50, Sociology 1.


A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor.

Each minor course must be taken for a letter grade, and students must have a minimum grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

African Studies Minor

The African Studies minor 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.


A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor.

Each minor course must be taken for a letter grade, and students must have a minimum grade-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.

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 2CW, 4CW, Dutch 10, English 90, French 12, 14, 14W, 41, 60, German 50B, 56, 58, 59, 61A, International and Area Studies 40, 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 125, Comparative Literature C164, Ethnomusicology 133, Film and Television 106B, Scandinavian C141A, C145A, C145B, C146A, 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, 123C, 131A, 134B, 134C, 135C, M162D, Political Science 111C, 127A, 153A; one additional course from either the humanities or social sciences list above.

A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor.

Each minor course must be taken for a letter grade, and students must have an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

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 International and Area Studies 50, Spanish 25 or Portuguese 27.

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.

A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor.

Each minor course must be taken for a letter grade, and students must have an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

South Asian Studies Minor

The South Asian Studies minor is designed for students who wish to augment their major with a concerted 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. The minor offers students an interdisciplinary curriculum in the humanities and the chair of International and Area Studies and the faculty adviser of the student. Honors and highest honors are recorded on the final transcript and diploma after students successfully complete the program.
required 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.

**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, 180C, Asian 151, 162, 163, 164, Asian American Studies M172A, Ethnomusicology 146, 147, History 174A through M174E, 175A, M175B, 175C, 185B, 185C, Is- lamics 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.

A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor.

Each minor course must be taken for a letter grade, and students must have an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

**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 non-language preparatory course in Southeast Asian studies, and (3) meet with the academic counselor in 105S7 Bunche Hall.

**Required Lower Division Courses (13 units):**

- History 9E, International and Area Studies 31, 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, 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 minor, 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.

A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor.

Each minor course must be taken for a letter grade, and students must have an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

**Study Abroad**

All majors and minors are highly encouraged to study abroad. Students can travel to all areas through a variety of programs with various lengths (summer or during the academic year).

Students may partially fulfill the area studies elective requirement by participating in an International Institute Summer Travel Study program consisting of two courses in and on a particular region of the world. Consult the Academic Counselor for more information on available programs.

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 and Area Studies**

**Lower Division Courses**

1. **Introduction to International and Area Studies.**
   - (5) Lecture, three hours; discussion, one hour. Introduction to international and area studies from interdisciplinary framework, covering themes related to international politics and markets, as well as international societies and cultures, to illuminate and clarify profoundly international character of world we live in and to introduce set of contemporary issues and challenges that cross borders and affect every region of world. P/NP or letter grading.

2. **Introduction to Southeast Asia.**
   - (Formerly numbered Southeast Asian Studies 1.) Lecture, three hours; discussion, one hour (when scheduled). Interdisciplinary survey designed as introduction to modern Southeast Asia. P/NP or letter grading.

3. **Introduction to East Asia.**
   - (Formerly numbered East Asian Studies 101.) Lecture, three hours; discussion, one hour (when scheduled). Interdisciplinary survey designed as introduction to modern East Asia. P/NP or letter grading.

4. **Introduction to Europe.**
   - (Formerly numbered European Studies 101.) Lecture, three hours; discussion, one hour (when scheduled). Interdisciplinary survey designed as introduction to modern Europe. P/NP or letter grading.

5. **Introduction to Latin America.**
   - (Formerly numbered Latin American Studies 97A.) Lecture, three hours; discussion, one hour (when scheduled). Interdisciplinary survey designed as introduction to modern Latin America. P/NP or letter grading.

**Upper Division Courses**

110A-110B. Field Studies in International and Area Studies. (4-4) (Formerly numbered East Asian Studies 191A-191B.) Seminar, three hours. Exploration of culture, economy, history, and politics of important locations around world. Hands-on experiential programs offered for students participating in UCLA Travel Study Program. Field trips included to gain first-hand experience. May be repeated with topic and/or location change. Offered in summer only. P/NP or letter grading.

188. Special Courses in International and Area Studies. (4) (Formerly numbered Southeast Asian Studies 188.) Seminar, three hours. Program-sponsored experimental or temporary courses, such as those taught by resident or visiting faculty members. May be repeated for credit with topic change. Letter grading.

191. Variable Topics Senior Research Seminars: International and Area Studies. (4) (Formerly numbered Southeast Asian Studies 191.) Seminar, three hours. Enforced requisite: course 1. Limited to senior international and area studies majors. Organized on topics basis with readings, discussions, papers, and development of culminating project. May not be repeated for credit. Letter grading.

193. Colloquia and Speaker Series. (1) (Formerly numbered European Studies 193.) Seminar, two hours. Introduction to current scholarship in field of international and area studies. Attendance at selected presentations with required response papers. May be repeated for credit. P/NP grading.
INTERNATIONAL DEVELOPMENT STUDIES

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

The International Development Studies major is a designated capstone major. Seniors must complete an advanced seminar that provides unique opportunity to work closely with a faculty member on a focused topic of research. Students completing the capstone should be able to demonstrate skills and expertise acquired in earlier coursework; identify, analyze, and select relevant data from primary and secondary sources; acquire a working knowledge of broader scholarly discourse; conceive and execute an original research paper; and engage with a community of scholars, presenting their work to peers as well as providing feedback to peers’ work. The seminar culminates in a written paper or project and a formal class report.

International Development Studies B.A.

Capstone Major

Admission

Admission to the International Development Studies major is by application only. To be eligible to apply, students must have first completed all 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 the Fall Quarter of their junior year. Meeting the above minimums does not guarantee admission to the program. Admission is on a competitive basis, using the above qualifications as minimum standards for consideration.

International Development Studies Premajor

Incoming freshman and transfer students may be admitted as International Development Studies premajors on acceptance to UCLA. Premajors must apply for major standing at the end of Fall Quarter of their junior year; they are not automatically accepted into the major.

Preparation for the Major

Required: (1) Two courses from Economics 1, 2, Geography 4; (2) one statistics course from Economics 41, Political Science 6, 6R, Statistics 10, or 12; (3) three social sciences/area studies courses, each from a different category, selected from 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

Transfer applicants to the International Development Studies premajor must choose in one modern foreign language and two courses in an area of interest to fulfill the foreign language requirement. In addition, Transfer Students must apply for the major by the end of Fall Quarter of their junior year. Refer to the UCLA Honors Program Guide 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, 100B, and 150; no more than one of these three courses may be repeated. All three core courses must be taken prior to the capstone senior seminar 191 course.

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 background in social sciences at college level. Designed for juniors/seniors. Broad theoretical and methodological introduction to international 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.

100B. Introduction to Development Studies: Political Economy of Development. (4) (Same as Political Science M167C.) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for International Development Studies majors. Political economy approach to puzzle of why some countries are rich and others are poor and why, among latter, some have been able to achieve rapid rates of economic growth and others have not. Explanation and review of logic behind most important arguments that have been advanced to account for differences across countries in rates and levels of economic development. Letter grading.

150. Economics of Developing Countries. (4) Lecture, three hours; discussion, one hour. Requisites: Economics 1 or 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 or letter grading.


192. Undergraduate Practicum in International Development Studies. (2) Seminar, two hours; practicum, three hours; discussion, one hour (when scheduled). Enrolled on topics basis. Limited to junior/senior International Development Studies majors. Students assist in preparation and presentation of materials and development of innovative programs with guidance of faculty members. Consult academic counselor for further information. May not be applied toward major requirements. May be repeated for credit. Up to 12 units. 198A-198B-198C. Honors Research in International Development Studies. (4–4–4) Tutorial, to be arranged. Preparation: 3.5 grade-point average in courses for major, formal application to honors program. Enforced requisites: courses 100A, 100B. Limited to junior/senior International Development Studies majors. May be repeated for credit. Individual contract required. 198A. Research, discussion, and planning of honors thesis under direct supervision of faculty member. Letter grading. 198B. Enforced requisite: course 198A. Research, discussion, and planning of honors thesis under direct supervision of faculty member. In Progress grading. 198C. Enforced requisite: course 198B. Final draft submission of honors thesis under direct supervision of faculty member. 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.
**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 prove 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.

The undergraduate major in this discipline is called African and Middle Eastern Studies. For details, see International and Area Studies earlier in this section.

**Graduate Study**

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website, http://grad.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 Courses**

200. Introduction to Islamic Studies. (4) Seminar, three hours. Introduction to various disciplines and methods employed in study of Islamic histories, cultures, and societies, with special emphasis on methodologies and current theories and how they may be used and combined by Islamic studies students. Content varies each year. Letter grading.

291A. Variable Topics in Islamic Studies. (4) Seminar, three hours. Selected topics on Islam. May be repeated for credit with topic change. S/U or letter grading.

**Italian**

**College of Letters and Science**

UCLA 212 Royce Hall
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http://www.italian.ucla.edu

Thomas J. Harrison, Ph.D., Chair

Professors

John A. Agnew, Ph.D.
Massimo Ciavolella, Ph.D. (Franklin D. Murphy Professor of Italian Renaissance Studies)
Thomas J. Harrison, Ph.D.
Lucia Re, Ph.D., Dottore in Lettere
Edward F. Tuttle, Ph.D.

Professors Emeriti

Michael J.B. Allen, Ph.D., D.Litt.
Luigi Ballerini, Dottore in Lettere
Franco Bett, 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.

**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 including a year abroad, students may pursue advanced studies in the department exclusively and through a wide range of interdisciplinary programs.

Bachelor of Arts degrees are offered in Italian and in Italian and Special Fields. Graduate study leads to the Master of Arts degree in Italian (with specializations in literature and language) and to the Ph.D. (literature specialization).

**Undergraduate Study**

The Italian and Italian and Special Fields majors are designated capstone majors. Students are required to conceptualize, design, and complete an interdisciplinary research project or thesis. Through the capstone experience, students demonstrate their mastery of an area of Italian culture, as well as their skills in identifying and analyzing primary sources, integrating what they have learned in the course of their major studies, and presenting their work to peers under the guidance of a faculty mentor who facilitates discussion and peer review.

**Italian B.A.**

**Capstone Major**

The program of studies leading to the Bachelor of Arts in Italian consists of two distinct phases: preparation in the language and study of the literature and culture. While literature courses constitute the bulk of the program, good knowledge of the language is requisite to most upper division literature courses credited toward the major in Italian. The uniqueness of Italian is stressed at all levels of study. Detailed information on programs and specific degree requirements is available from the department.

**Preparation for the Major**

Required: Italian 1, 2, 3, 4, 5, 6, and one course from 42A, 42B, 42C, 48, 50A, or 50B.

**Transfer Students**

Transfer applicants to the Italian major with 90 or more units must complete the following introductory courses prior to admission to UCLA: two years of Italian and one Italian civilization or culture course.

Refer to the UCLA Transfer Admission Guide 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, 199B (se- rior capstone course), one medieval to 18th century course from 113 through 118, one En- lightenment to contemporary course from 119 through 125, and five elective courses from 113 through 191. With consent of the under- graduate 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.**

**Capstone Major**

Students with special interests or professional goals may select the Italian and Special Fields major, with coursework divided between Italian and a collateral field. Study programs fulfilling requirements for the major have been developed with the departments and programs listed below.

Majors who select courses taught in English must do additional work from the original Italian texts in consultation with the course instructor.

**Transfer Students**

Transfer applicants to the Italian and Special Fields major with 90 or more units must complete the following introductory courses prior to admission to UCLA: two years of Italian and related courses in civilization, culture, history, linguistics, literature, and closely related languages.

Refer to the UCLA Transfer Admission Guide 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, 199B (senior capstone course), 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.

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, 199B (senior capstone course), 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 or Latin 1, 2, 3, or equivalent.

The Major
Required: Italian 100, 103A or 103B, 180, 199B (senior capstone course), 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, 199B (senior capstone course), and four courses from 113 through 191 selected in consultation with the undergraduate adviser; four courses from English 100 through 113A, 114 through 135, 139 through 183C selected in consultation with the undergraduate adviser.

Film and Television Field
Preparation for the Major
Required: Italian 1, 2, 3, 4, 5, 6, 46.

The Major
Required: Italian 100, 103A or 103B, 121, 199B (senior capstone course), 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, 199B (senior capstone course), 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.

Gender Studies Field
Preparation for the Major
Required: Italian 1, 2, 3, 4, 5, 6, and one course from 42A, 42B, 42C, 46; Gender Studies 10.

The Major
Required: Italian 100, 103A or 103B, M158, 199B (senior capstone course), and three courses from 113 through 191 selected in consultation with the undergraduate adviser; Gender Studies 110A or 110B, and five additional upper division courses from any of the gender studies course lists 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 History 1A, 1B, 1C, 88.

The Major
Required: Italian 100, 103A or 103B, M158, 199B (senior capstone course), and three courses from 113 through 191 selected in consultation with the undergraduate adviser; 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, 199B (senior capstone course), 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, two courses from Music History M10A, M10B, M10C.

The Major
Required: Italian 100, 103A or 103B, 125, 199B (senior capstone course), and three courses from 113 through 191 selected in consultation with the undergraduate adviser; five courses from Music History 125D, 125E, 125F, 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, 199B (senior capstone course), 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, 199B (senior capstone course), 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, 46.

The Major
Required: Italian 100, 103A or 103B, 180, 199B (senior capstone course), and three courses from 113 through 191 selected in consultation with the undergraduate adviser; three courses from Portuguese 130A through 191 selected in consultation with the undergraduate adviser.

Spanish Field
Preparation for the Major
Required: Italian 1, 2, 3, 4, 5, 6, and one course from 42A, 42B, 46, 50A, 50B; Spanish 1, 2, 3, 4, 5, 25 (or equivalent as determined by placement test), 42 or 44.

The Major
Required: Italian 100, 103A or 103B, 180, 199B (senior capstone course), and three courses from 113 through 191 selected in consultation with the undergraduate adviser; Spanish 120
Required Lower Division Courses (12 units): Italian 5, 6, and one course from 42A, 42B, 46, 50A, 50B.

Required Upper Division Courses (20 units): Italian 100 and four additional Italian courses. Three of the four courses must be taught in Italian.

A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor.

Each minor course must be taken for a letter grade, and students must have an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

Graduate Study
Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website, http://grad.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 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.
2. 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.
4. Special Reading Course. (4) Readings, three hours. Open to graduate students in other fields. Preparation for Graduate Division foreign language reading requirement.
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.

Italian Minor
To enter the Italian minor, students must have an overall grade-point average of 2.0 or better.
include Vico, Goldoni, Alfieri, Beccaria, Rosalba Carriera, Piranesi, Tiepolo, Leopardi, Manzoni, Pirandello, Alberoni, Mannucci, Medoro, Modigliani, De Chirico, Calvino, Ortese, Pasolini, Franca Rame, and Dario Fo. P/N or letter grading.

10. Dante in English. (4) Lecture, three hours. Close study of one of world's greatest literary geniuses, particularly of his masterpiece, *Divine Comedy*, and the archetypal medieval journey through the afterworld. P/N or letter grading.


11A-114B. Middle Ages. (4-4) Lecture, three hours. Enforced requisite: course 100. Taught in Italian. Study of medieval literature, philosophy, and politics in *La Divina Commedia*, greatest literary achievement of the age. P/N or letter grading.

114A-114B. Middle Ages. (4-4) Lecture, three hours. Enforced requisite: course 100. Taught in Italian. Study of medieval literature, philosophy, and politics in *La Divina Commedia*, greatest literary achievement of the age. P/N or letter grading.

121. Italian through Opera. (4) Lecture, three hours. Enforced requisite: course 6. Taught in Italian. Introduction to traditional Italian opera as means of appreciating culture of Italy, art form of opera, and study of Italian language at advanced level through reading of libretti. Six masterworks of Italian opera tradition — *Il Barbiere di Siviglia*, *La Bohème*, *Pagliacci*, *Otello*, *Tosca*, 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/N or letter grading.


140. Italian Novella from Boccaccio to Basile in Translation. (4) Lecture, three hours. Analysis of development of Italian novella in its structure, historical context, and folk material. Special emphasis on how Italian novella influenced other European literatures. P/N 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 concerns and styles of several prose works such as Umberto Eco's *The Name of the Rose*, Pasolini's *The Ragazzi*, Pirandello's *The Late Mattia Pascal*, and Calvino's *The Cosmicomics*. P/N or letter grading.

M158. Women, Gender, and Sexuality in Italian Culture. (4) Same as Gender Studies M158. Lecture, three hours; discussion, one hour. Analysis of gender roles, images of femininity and masculinity, patriarchy, myths of Madonna and 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/N or letter grading.

180. History of Italian Language. (4) Lecture, three hours. Enforced requisite: course 100. Taught in Italian. Focus on forms that have shaped Italian or standard Italian and specific ways in which language has evolved. Tracing of its changing relations with other European languages and survey of effects wrought by historical events, changes in taste, and altered social functions. P/N or letter grading.

190. 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. Letter grading.

199B. Directed Capstone Research in Italian and Italian Special Fields. (4) Tutorial, to be arranged. Requisites: courses 100, 103A or 103B, and at least three required courses for one field. Limited to senior Italian and Italian and Special Fields majors. Supervised individual research under guidance of faculty mentor. Capstone tutorial in which interdisciplinary paper (20 to 25 pages) is to be written in either Italian or English that requires students to synthesize their knowledge of Italian or Italian and one special field of study. Individual contract required. Letter grading.

Graduate Courses


205. Studies in Criticism and Theory. (4) Seminar, three hours. History, theory, and practice of criticism. Presentation, discussion, and application of fundamental currents in aesthetics and criticism from Plato and Aristotle to present, including thematic and genre criticism, poststructuralist approaches, and feminist criticism. Letter grading.

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.


215. La Divina Commedia. (4) Lecture, three hours. S/U or letter grading.

214B. Dante's Other Works. (4) Lecture, three hours. S/U or letter grading.


214E. Boccaccio's Other Works. (4) Lecture, three hours. S/U or letter grading.

214F. Variable Topics. (4) Lecture, three hours. Variable-content seminar on themes and issues of medie-


215B. Age of Lorenzo de' Medici and Poliziano. S/U or letter grading.


216A. Machiavelli and Renaissance Political Thought. (4) Lecture, three hours. S/U or letter grading.

216B. Ariosto and Renaissance Epic. (4) Lecture, three hours. S/U or letter grading.

216C. Tasso. (4) Lecture, three hours. S/U or letter grading.

216D. Renaissance Theater. (4) Lecture, three hours. S/U or letter grading.

216E. Variable Topics. (4) Lecture, three hours. Variable-content seminar on themes and issues of Renaissance literature, with coverage of authors such as Vasari, Leonardo, and Bembo. S/U or letter grading.


218B. Affieri. (4) Lecture, three hours. S/U or letter grading.

218C. Goldoni. (4) Lecture, three hours. S/U or letter grading.

218D. Variable Topics. (4) Lecture, three hours. Variable-content seminar on themes and issues of 18th-century literature, with coverage of authors such as Vico or Ludovico. S/U or letter grading.


219A. Foascolo. (4) Lecture, three hours. S/U or letter grading.

219B. Leopardi. (4) Lecture, three hours. S/U or letter grading.


219D. Variable Topics. (4) Lecture, three hours. Variable-content seminar on themes and issues of 19th-century literature, with coverage of authors such as Carducci, Tommaso, or Nievo. 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 two major 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. Analysis of two of the century’s most prominent literary trends of the neo-avant-garde: S/U or letter grading.

221D. 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 Strecker, Roncoroni, and the playwrights/actors themselves. Emphasis on the ritualistic implications of the theatrical performance. S/U or letter grading.

222A-222B. Comparative Romance Historical Grammar. (4-4) Formerly numbered M222A-M222B.) 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 modern Romance dialects. 222B. Morphology and Syntax. Prime morpho-syntax changes occurring between late Latin and modern Romance dialects.

223. Structures of Modern Italian. (4) Lecture, three hours. Descriptive analysis of basic features of standard Italian from synchronic, typological vantage. Topical emphasis may vary annually, but core progression departs from phonology (e.g., syllable types, prosodic patterns, phrasal phonetics), moves through morphological constituents, passing to sentence sequences (coordination, subordination, etc.), S/U or letter grading.

224. Italo-Romance Dialectology. (4) Lecture, three hours. Differentiation of late spoken Latin into myriad varieties spoken in Italy. Attention to discrete language types (e.g., Sardinian, Ladino, Friulian, and French influence). Consideration of present-day sociolinguistic 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.


M241. Seminar: Political Geography of Italy. (4) (Same as Geography M241.) Seminar, three hours; reading period, two hours. Topics in political geogaphy with particular emphasis on Italy. May be repeated for credit. S/U or letter grading.

250A-250D. Seminars: Dante. (4 each) Seminar, three hours. S/U or letter grading.


253A-253B. Seminars: Chivalric Poetry in Italy. (4-4) Seminar, three hours. Relationships between genre and its French medieval sources, with study of its evolution in Italy through Pulci, Boccaccio, Ariosto, and Tasso. S/U or letter grading.


255A-255B. Seminars: Baroque. (4-4) Seminar, three hours. S/U or letter grading.

256A-256B. Seminars: 18th Century. (4-4) Seminar, three hours. S/U or letter grading.

257A-257B. Seminars: Romanticism. (4-4) Seminar, three hours. S/U or letter grading.

258A-258B. Seminars: Contemporary Italian Literature. (4-4) Seminar, three hours. S/U or letter grading.

260A. Alternative Perspectives in Italian Culture: Studies of Folk Tradition in Italian Literature. (4) Lecture, three hours. Open to undergraduate students with consent of instructor. Conspicious diversity of the Italian national imaginary; the folk tradition from modern to postmodern Italian societies. 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.

261. Seminar: Neorealism. (4) Lecture, three hours. Designed for graduate students. Italian cinema compared to 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.

M270. Seminar: Literary Theory. (8) (Same as Asian M251, Comparative Literature M294, English M270, French M270, German M270, Scandinavian M270, and Spanish M294.) Seminar, three hours. Advanced interdisciplinary seminar to explore philosophical, historical, and critical foundations of literary theory as well as current issues in literary and cultural studies. S/U or letter grading.

290. Variable Topics in Italian Studies. (4) Lecture, three hours; discussion, one hour. 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, Information Studies M299, Slavic M299, and Spanish M298.) 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 demonstrations, and research exercises 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 curriculum and instruction at UCLA. May be repeated for credit. S/U grading.

465A-465B-465C. 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 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.

506. Directed Individual Studies. (2 to 12) May be repeated twice for credit. S/U grading.

507. Preparation for M.A. Comprehensive Examination or Ph.D. Qualifying Examinations. (2 to 12) S/U grading.


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**Labor and Workplace Studies Interdisciplinary Minor College of Letters and Science**

**UCLA**

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Los Angeles, CA 90095-1478

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Christopher L. Erickson, Ph.D., Chair

Faculty Committee

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Sanford M. Jacoby, Ph.D. (Management)

Jacqueline Leavitt, Ph.D. (Urban Planning)

Ching-Kwan Lee, Ph.D. (Sociology)

Janice L. Reiff, Ph.D. (History, Statistics)

Mark Q. Sawyer, Ph.D. (Political Science)

Abel Valenzuela, 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 substantive 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, (213) 247-2540, laminor@lirel.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 113, M116, Chicana and Chicano Studies M125, M127, M128, 129, Economics 150, 151, Gender Studies M137E, M163, History 141B, 146A, 146B, any labor and workplace studies course, Management 180, Political Science 116A, 140C. Psychology M137E, Public Policy 141, C144, 145, Sociology 157, M163, 171, 173. Students may petition, prior to enrollment in the course, 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 requirements or another minor.

Each minor course must be taken for a letter grade, and students must have a minimum grade of C (2.0) in each and an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

Labor and Workplace Studies

Lower Division Courses

M1A-B18 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, M1C. 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, four hours. Enforced requisite: course 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 context of African American social movements, and relationship between black political thought and major trends in Western thought. P/NP or letter grading.

M116. Asian American Social Movements. (4) (Same as Asian American Studies M116.) Lecture, three hours. Designed for juniors/seniors. Examination of several dimensions of Asian American social movements, including grassroots, mass movement characteristics, political, social, and racial 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. Experimental course in which students learn broad array of negotiation skills, including identifying one’s own (and others’) communication style, identifying and incorporating components of successful negotiation and resolving conflict between parties. Letter grading.

M119. Asian American and Pacific Islander Labor Issues. (4) (Same as Asian American Studies M119.) Lecture, three hours. Examination of historical and contemporary labor issues in Asian and Pacific Islander American communities, with emphasis on key role that Asian and Pacific Islander American students can play in supporting labor struggles of low-income immigrants. P/NP or letter grading.

M121. Issues in Latina/Latino Poverty. (4) (Same as Chicana and Chicano Studies M121 and Urban Planning M140.) Lecture, four hours. Examination of nature and extent of underrepresentation of Latinx in U.S. society, history of Latinx in U.S. Society, and implications for Latina/Latino communities in U.S. Special emphasis on aptitude of policies and government and nonprofit organizations and social planning and economic development strategies. Attention also to literature on underclass. Letter grading.

M122. Planning Issues in Latina/Latino Communities. (4) (Same as Chicana and Chicano Studies M122 and Urban Planning M171.) Lecture, four hours. Exploration of socioeconomic, demographic, and political forces that shape low-income communities and analyses of planning intervention strategies. Emphasis on history and economic development and environmental planning. P/NP or letter grading.

M123. Chicano/Latino Community Formation: Critical Perspectives and Oral Histories. (4) (Same as Chicana and Chicano Studies M119.) Lecture, four hours. Analysis of historical formation and development of Chicano/Latino communities in 20th century, with focus on labor, immigration, economic structures, political, 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. Farmworker Movements, Social Justice, and AFL-CIO. (4) (Same as Chicana and Chicano Studies M127.) Lecture, four hours. Designed for juniors/seniors. Historical and social context of farmworker organizing, including its multiracial origins and its influence on fight for equality of working women. Special focus on organizing of United Farm Workers and other laborers of Latinx background with 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 equity pursued through organized labor and other means. Letter grading.

M144. Women’s Movement in Latin America. (4) (Same as Chicana and Chicano 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 indigenous rights movements, environmental struggles, labor movements, Christian-based communities, peasant and rural organizing, and new social movements that are concerned with race, sexuality, feminism, and human rights. Through comparative study of women’s movements in diversity of political systems as well as national and transnational arenas, students gain understanding of historical 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.

M149. Media: Gender, Race, Class, and Sexuality. (5) (Same as Communication Studies M149 and Gender Studies M149.) Lecture, four hours; discussion, one hour. Limited to junior/senior Communication Studies and Gender Studies majors and Labor and Workplace Studies minors. Examination of manner in which media culture induces people to perceive various dominant and coded groups of people. Ways in which women, gay, lesbian, bisexual, transgendered, racial, and ethnic marginalized peoples, classes, relations, and other subaltern or subordinated groups are presented and often misrepresented in media. Investigation and employment of practical applications of communications and feminist theories for understanding ideology of diverse communities and politics of representation through use of media, guest presentations, lectures, class discussions, and readings. Introduction to theory and practice of cultural studies. Letter grading.

160. Research Group or Internship Seminars: Labor and Workplace Studies. (4) Seminar, three hours. Enforced corequisite: course 195A. Designed for undergraduate students who are part of Labor Summer Research Internship program. Discussion of qualitative applied research methods used by union researchers and scholars engaged in labor relations and workplace studies. Through combination of lectures, key readings, and actual case studies, hands-on research internship with local unions and organizations, development of understanding of critical debates regarding role of research and socioeconomic contexts that impact low-wage workers and their families. Offered in summer only. Letter grading.

M165. Sociology of Race and Labor. (4) (Same as Afro-American Studies M165 and Sociology M165.) Lecture, three hours; discussion, one hour. Limited to juniors/seniors. Exploration of relationship between race/ethnicity, employment, and U.S. labor movement. Analysis of underlying racial divisions in workforce and how they evolved historically. Consideration of circumstances under which workers and unions have excluded people of color from jobs and unions, as well as circumstances under which workers and unions have organized people of color into
unions in efforts to improve their wages and working conditions. Impact of globalization on these dynam-ics. P/NP or letter grading.

M166A. Immigrant Rights, Labor, and Higher Educa-
tion. (4) (Same as Asian American Studies M166A
and Chicana and Chicano Studies M156A.) Seminar,
three hours. New immigrant rights movement, with
particular attention to labor and higher education.
Overview of history of immigrant rights movement
and examination of development of coalition efforts
between labor movement and immigrant rights move-
ment) Seminar, two hours. Special focus on issue of
immigrant students in higher education, challenges
facing undocumented immigrant students, and legis-
lative and policy issues that have emerged. Students
conduct oral histories, family histories, research on
immigration and immigrant rights, write poetry and
spoken word about immigrant experience, and work
to collectively develop student publication on immi-
grant 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
M156B.) Seminar, two hours. Requisite: course
M166A. Expansion of research conducted by stu-
dents in course M166A involving oral histories, re-
search on immigration/labor/higher education, and
evaluation of legislation and legal issues impacting
undocumented students. Letter grading.

M167. Worker Center Movement: Next Wave Orga-
nizing for Justice for Immigrant Workers. (4)
(Same as Afro-American Studies M167, Asian Amer-
ican Studies M167A, and Chicana and Chicano Stud-
ies M130D.) Seminar, three hours. Development of the-
etorical and practical understanding of worker center
movement, with focus on historical factors that have
led to emergence and growth of worker centers. Role
of worker centers in promoting multiracial and multi-
racial campaigns for workplace and economic justice.
Students conduct oral histories and interviews with
undocumented workers. P/NP or letter grading.

M170. Improving Worker Health: Social Move-
ments, Policy Debates, and Public Health. (4)
(Same as Community Health Sciences CM170.) Lec-
ture, three hours; fieldwork, two hours. Examination
of intersection between work, health, and environ-
ment, analysis of social causes of health disparities, inves-
tigation of historical trends and social movements,
interpretation of research methods and current
literature in field of labor studies or of research of fac-
culty members or/and students. May be repeated for
credit. P/NP or letter grading.

M175. Agitational Communication. (4) (Same as
Communication Studies M165.) Lecture, four hours;
discussion, one hour (when scheduled). Theory of ag-
itiation; agitation as force for change in existing insti-
tutions and policies in democratic society. Intensive
study of selected agitational movements and tech-
niques and content of their communications. Letter
grading.

(4) (Same as Communication Studies M176.) Lec-
ture, four hours. Visual communication reaches di-
verse audiences in communicating major social and
political topics. Cartoons, posters, murals, and docu-
mentary photography have had powerful world
impact. Survey of all four genres of visual communi-
cations as features of modern mass media. Letter
grading.

M180. Southern California Regional Economy. (4)
(Same as Urban Planning CM137.) Lecture, three
hours. Introduction to regional economy, with empha-
sis on Los Angeles. Key economic sectors, labor mar-
ket 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. Letter grading.

188. Special Courses in Labor and Workplace
Studies. (4) Seminar, four hours. Program-sponsored
experimental or temporary courses, such as those
taught by visiting faculty members. May be repeated
for credit. P/NP or letter grading.

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 fac-
culty members or/and students. May be repeated for
credit. P/NP or letter grading.

195A. Community or Corporate Internships in
Labor and Workplace Studies. (4) (Formerly numbered
195A.) Tutorial, one hour; fieldwork, 15 hours. Enforced
corequisite: course 160. Limited to juniors/seniors. In-
ternship in supervised setting in community agency,
labor union, or other organization concerned with
work and employment issues. Placements to be ar-
anged by instructor. Students meet on regular basis
with instructor and provide periodic written reports on
their experience. May be repeated for credit. Individu-
al 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 4) Tutorial, to be
arranged; internship, up to 15 hours. Limited to ju-
niors/seniors. Internship in supervised setting in com-
munity agency, labor union, or other organization
concerned with work and employment issues. Place-
ments to be arranged by instructor. Students meet on
regular basis with instructor and provide periodic writ-
ten 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 guid-
cance of faculty mentor. Culminating paper or project
required. May be repeated for credit. Individual con-
tract required. P/NP or letter grading.

LATIN AMERICAN STUDIES

Interdepartmental Program

College of Letters and Science

UCLA

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Bonnie Taub, Ph.D., Co-Chair

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Faculty Committee

César J. Ayala, Ph.D. (Sociology)
Stephen A. Bell, Ph.D. (Geography, History)
Robin L.H. Derby, Ph.D. (History)
Susanna B. Hecht, Ph.D. (Urban Planning)
J. Randall Johnson, Ph.D. (Spanish and Portuguese)
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Elizabeth Marchant, Ph.D. (Comparative Literature, Gender Studies)
Karin Nielsen, M.D., M.P.H. (Pediatrics)
José Luiz Passos, Ph.D. (Spanish and Portuguese)
Bonnie Taub, Ph.D. (Community Health Sciences, Health Policy and Management)
Kevin B. Terraciano, Ph.D. (History)
Abel Valenzuela, Jr., Ph.D. (Chicana and Chicano Studies, Urban Planning)

Scope and Objectives

UCLA has been in the forefront of U.S. univer-
sities with significant teaching and research in-
terests in Latin American studies for more than
50 years. More than 100 faculty members from
32 departments and professional schools reg-
ularly offer a broad range of courses with an
emphasis on Latin America. These course of-
ferings in the humanities, social sciences, fine
arts, and professional fields provide students a
unique opportunity to focus on Latin America,
a region of growing importance.

The Latin American Studies Program offers the
Master of Arts degree. Students pursue spe-
cialized coursework and interests, culminating in
an interdisciplinary research study. Coopera-
tive degree programs with the UCLA Schools of
Education and Information Studies, Man-
agement, Public Health, and Public Affairs pro-
vide the opportunity to combine the M.A. in
Latin American Studies with a master's degree in
a professional field.

Information on the undergraduate program in
this discipline, which offers a major and a mi-
nor in Latin American Studies, can be found in
the International and Area Studies section ear-
lier 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://grad.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 Latin American Studies Program offers the
Master of Arts (M.A.) degree in Latin American
Studies.

Three articulated degree programs (Latin
American Studies M.A./Education M.Ed., Latin
American Studies M.A./Library and Information
Sciences M.L.I.S., and Latin American Studies
M.A./Public Health M.P.H.) and two concurrent
degree programs (Latin American Studies
M.A./Management M.B.A. and Latin American
Studies M.A./Urban Planning M.U.R.P.) are also
offered.

Official, specific degree requirements are de-
tailed in Program Requirements for UCLA
Graduate Degrees, available at the Graduate
Division website, http://grad.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.

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degree programs (Latin American Studies
M.A./Management M.B.A. and Latin American
Studies M.A./Urban Planning M.U.R.P.) are also
offered.
Latin American Studies

Graduate Courses

M200. Latin American Research Resources. (4) (Same as History M255 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 M273.) 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 core curriculum in Latin American studies. Seminar devoted to selected topics of an interdisciplinary nature.

M260. Health and Culture in Latin America. (4) (Same as Anthropology M266 and Community Health Sciences M260.) Lecture, three hours. Recommended requisite: Community Health Sciences 132. Health issues throughout Americas, especially indigenous/Mestizo Latin American populations. Holistic approach covering politics, economics, history, geography, human rights, maternal/child health, culture, letter grading.

M262. HIV/AIDS and Culture in Latin America. (4) (Same as Community Health Sciences M250.) Seminar, three hours, Exploration of cultural, political, and public health context for people living with and at risk for HIV/AIDS and their families in Latin America. Public health aspects, including epidemiology, comorbidity 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 M264.) 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. Examination of art, music, and ritual and case examples of religion and healing practices via lecture, film, and audiotape. Letter grading.

M269A-M269B. Seminars: Recent Latin American History. (4) (Same as History M268A-M268B) Seminar, three hours. Course M268A is requisite to M268B. Reading knowledge of Spanish or Portuguese normally required. Seminar devoted to selected topics of interdisciplinary nature. In Progress (M268A) and letter (M268B) grading.

291A-291B. Variable Topics in Latin American Studies. (4-4) Seminar, three hours. Selected topics on Latin America. May be repeated for credit with significant change, S/U or letter grading.

501. Cooperative Program. (2 to 8) Preparation: consent of UCLA graduate adviser and graduate dean, and host campus instructor, department chair, and graduate dean. Used to record enrollment of UCLA students in courses taken under cooperative arrangements with USC, S/U grading.

596. Directed Individual Study or Research. (2 to 8) Tutorial, to be arranged. May be repeated, but only 4 units may be applied toward the minimum graduate course requirement. S/U or letter grading.

597. Preparation for M.A. Comprehensive Examination. (4) Tutorial, to be arranged. Ordinarily taken only during term in which student is being examined. S/U grading.

598. Research for and Preparation of M.A. Thesis. (4) Tutorial, to be arranged. Only 4 units may be applied toward minimum graduate course requirement. S/U grading.

Law

School of Law

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http://www.law.ucla.edu

Rachel F. Moran, J.D., Dean

Professors

Professors Emeriti

Lecturers
161. Consumer Bankruptcy Policy Seminar. (3) Seminar, 13 hours. Examination of consumer bankruptcy cases, plans, and legislation. Credit: 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 the requirement that debtors should be released from debts, what property debtors should keep, and how debtors can put together re-payment plans. P/NP or letter grading.


170. Race and Racism in California Legal History, 1846 to the Present, (4) Seminar, 14 hours. Limited to law students/enrolled in the seminar. Exploration of California legal history, with focus on issues of race and racism, beginning with mid-19th-century transition from Mexican Alta California to U.S. territory and statehood. Topics include affecting California residents in the 19th century, African Americans in California’s 19th-century history, measures used to curtail Chinese immigration laws designed to prevent racial intermixing, Alien Land Laws aimed at Japanese residents of California, relocation of Japanese citizens after Pearl Harbor, California’s response to U.S. immigrants from dust bowl during great depression, post-World War II through 1960s aimed at equal access to things like home ownership, employment, and rental housing, and uses of initiative in modern era. P/NP or letter grading.

173. Topics in American Constitutional History, (4) Lecture, three hours. Introduction to major themes, events, and cases in American constitutional history. U.S. Supreme Court decisions and other sources of constitutional meaning, including popular movements and expressions of constitutional principle from actors in other branches of federal government and in state. Emphasis on historical background and ideological context for particular constitutional controversies at various points in American history, with more formal analysis of particular decisions and competing methods of constitutional interpretation considered. Topics include state and federalism, constitutional law, reapportionment, and meaning of federalism in early republic, slavery and constitution, Reconstruction Amendments, laissez faire constitutionalism, citizenship and empire, origins of civil liberties, New Deal constitutionalism, and prehistory of Brown versus Board of Education. P/NP or letter grading.

175. Seminar: Individual Rights Protected by U.S. Constitution, (3) Seminar, two hours. Limited to juniors/seniors. Broader introduction to and examination of individual rights protected under Bill of Rights and 14th Amendment to U.S. Constitution, including freedom of speech and press, religion, right to privacy (including reproductive rights), due process of law, constitutional protection against discrimination based on race and gender, and basic criminal procedure protections. Emphasis on principal Supreme Court cases establishing scope of those rights and their limits. Letter grading.

180. Special Topics in Law, (4) Lecture, four hours. Topics of special interest to undergraduate students. Specific subjects may vary each term depending on particular interest of instructors or students. May be repeated for credit. P/NP or letter grading.

182. Law and Popular Culture, (4) Lecture, four hours. Focus on interface between two important subjects – law and popular culture. Students view series of films or television shows related to law, lawyers, and legal system. Discussion of pop culture treatment of subjects such as adversary system, good and bad lawyers, female lawyers, lawyers from lesbian, gay, bisexual, and transgender community, minority lawyers, work of lawyers, legal education, ethical issues, jury system, and criminal and civil justice, drawing on film theory and filmmaking techniques to deepen understanding of interrelationship between law and popular culture. Illumination of ways in which pop culture projects both our public and private views about law and lawyers. Offered in summer only. 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 apprenticeship 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, exploring precedent and stare decisis, separation of powers, and statutory interpretation. P/NP or letter grading.

185. Corporate Mock Trial, (4) Lecture, four hours. Introduction to basic principles of business law, such as how law applies to various business entities, duties and liabilities of corporate officers and directors, and shareholder derivative suits. American legal system and how litigation progresses from filing of complaints through trial. Students participate in mock trial at end of course. P/NP or letter grading.

186. Law and Order, (2) Lecture, two hours. Introduction to basic principles of criminal law. How to read and interpret judicial cases and provisions of penal code to learn how American criminal justice system works. Discussions structured to simulate experience of typical law school classroom. P/NP or letter grading.

187A. Legal History Colloquium, (3) Seminar, two hours. Corequisite: course 193. Reading of scholarly papers prepared by school faculty members and other 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 politics and international law. Weekly presentations on topic by 10 leading law and political scientists and scholars from U.S. and abroad. Reading of scholarly papers, preparation of critiques, and discussion of issues in seminar setting with authors of papers. P/NP or letter grading.

191. Variable Topics Research Seminars: Law — California Legal History, (4) Seminar, two hours. Requisite: course 170. Research project, selected in consultation with faculty member and using original and secondary materials, to be conducted, followed by major presentation of student work to class and writing of major research paper. Letter grading.

193. Journal Club Seminars: Law, (1) Seminar, one hour; discussion, two hours. Corequisite: course 193. Directed reading of scholarly papers in colloquium series. Reading of legal cases and supplemental material to provide legal framework for each colloquium paper presented in colloquium. Supervised by faculty member in charge of colloquium series. May be repeated for credit. P/NP or letter grading.

199. Directed Research in Law, (1 to 6) Tutorial, three hours per week, arrangement and to juniors/se- niors. Supervised individual research under guidance of faculty mentor. Culminating scholarly paper required. May be repeated for credit. Individual contract required. P/NP or letter grading.
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 (28 units):

- Lesbian, Gay, Bisexual, and Transgender Studies M114, 180SL, and five additional courses to be selected from at least three of the following four areas:
  - Health, Genetics, and Science: Lesbian, Gay, Bisexual, and Transgender Studies M147A, 184, Psychology 129E.

Students may petition to apply a non-listed course on the minor 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 the program coordinator who can help them plan their course of study.

A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor.

Each minor course must be taken for a letter grade. Students are expected to do a capstone internship in an international, national, or community organization, thereby acquiring invaluable first-hand knowledge, experience, and data. After completing the minor, students should be familiar with the theoretical tools that different disciplines employ to study sexuality. They should be acquainted with some of the many different ways sexuality has been organized in the past and is organized in different cultures in the present and should have an enhanced understanding and appreciation both of the sexual diversity of the world in which they live and of the complex ways in which sexuality interacts with other categories of identity and practice.

Scope and Objectives

Although the initial focus in lesbian, gay, bisexual, and transgender studies is usually on minority sexualities and transgenderism, it is impossible to study them in any meaningful way without raising questions about gender, race, ethnicity, economics/class, globalism, 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 leads to the much larger study of sexuality and culture. It represents an important vantage point from which to investigate the social construction of sexual identity, social control of behavior, changing definitions of the family, and culture. It represents an important vantage point from which to investigate the social construction of scientific knowledge. Thus lesbian, gay, bisexual, and transgender studies is the site of some of the most exciting work being done today on the relationship between sexuality and culture.

UCLA’s minor in Lesbian, Gay, Bisexual, and Transgender Studies provides the opportunity to study sexuality from a variety of cultural and disciplinary perspectives meant to engage students in some of the most cutting-edge research in lesbian, gay, bisexual, transgender, and queer studies. In addition, seniors in the minor are expected to do a capstone internship in an international, national, or community organization, thereby acquiring invaluable first-hand knowledge, experience, and data. After completing the minor, students should be familiar with the theoretical tools that different disciplines employ to study sexuality. They should be acquainted with some of the many different ways sexuality has been organized in the past and is organized in different cultures in the present and should have an enhanced understanding and appreciation both of the sexual diversity of the world in which they live and of the complex ways in which sexuality interacts with other categories of identity and practice.
and health experiences, and queer or transgender theories; multiethnic and cross-cultural emphases. May be repeated for P/NP or letter grading.

M116. Sexuality and the City: Queer Los Angeles. (Same as Gender Studies M116.) Lecture, three hours. Requisite: course M114. Investigation of history, culture, and political economy of lesbian, gay, bisexual, and transgender studies perspective. P/NP or letter grading.

M118. Queering American History. (Same as Gender Studies M118.) Lecture, four hours. Enforced requisite: one prior History of sexual and gender minorities in U.S. Topics include changing norms, romantic friendship, medical discourse, liberation politics, post-Stonewall culture, AIDS, transgender movement, queer theory, and politics. P/NP or letter grading.

M126. Feminist and Queer Theory. (Same as English M126 and Gender Studies M126.) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisite: English Composition 3 or 3H. Recommended: one previous English 120, 121, Gender Studies 102, 103, or 104. Investigation of key concepts and debates in study of gender, sexuality, and kinship, with focus on their interrelated significance for making of culture. Readings to be interdisciplinary, with primary focus 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.


M134. Cultural Construction of Gender and Sexuality: Homosexualities. (Same as Anthropology M134 and Honors Collegium M129.) Seminar, three hours. Comparative analysis of role of environment, history, and culture in structuring of patterns of same-sex erotic behavior in Asia, Africa, Middle East, Pacific, Caribbean, and aboriginal America. P/NP or letter grading.

M137. Lesbian, Gay, Bisexual, Transgender, and Queer Perspectives in Pop Music. (Same as Music History M137.) Lecture, four hours; discussion, one hour. Survey of English-language popular music in 20th century from perspective on lesbians, gay men, and members of other sexual minorities as creators, performers, and audience members. Letter grading.

M147A. Psychology of Lesbian Experience. (Same as Psychology M147A and Gender Studies M147A.) Lecture, four hours; discussion, one hour. Requisite: course M114 or Gender Studies 10 or Psychology 10. Designed for juniors/seniors. Review of research in psychology and gender 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.

M167.Contested Sexualities. (Same as Gender Studies M167.) Lecture, three hours; discussion, one hour. Sociological perspectives on formation, control, and resistance of lesbian, gay, bisexual, and transgendered people. Variable topics include identity and community; age, class, gender, and racial diversity; and analysis of contemporary issues affecting contested or disregarded sexual identities. Letter grading.

180SL. Lesbian, Gay, Bisexual, and Transgender Institutions and Organizations. (4) Lecture, three hours; fieldwork, five hours. Preparation: one prior lesbian, gay, bisexual, and transgender studies course. Service-learning course that offers opportunity for students to work in lesbian, gay, bisexual, and transgender-related community organizations, to reflect on political and theoretical issues involved in such work and such organizations, and to draw ideas from various courses they have already taken and test their applicability. UCLA: P/NP or letter grading.

181. Variable Topics in Queer Diversities. (4) Lecture, two hours; discussion, two hours. Study of topics about queer diversities from lesbian, gay, bisexual, and transgender studies perspective. P/NP or letter grading.

182. Variable Topics in Education, Law, and Public Policy. (4) Lecture, two hours; discussion, two hours. Study of law, education, and public policy topics from lesbian, gay, bisexual, and transgender studies perspective. P/NP or letter grading.

183. Variable Topics in Queer Subjectivities/Theories/History. (4) Lecture, two hours; discussion, two hours. Study of topics about queer subjectivities/theories/histories from lesbian, gay, bisexual, and transgender studies perspectives. P/NP or letter grading.

184. Variable Topics in Science, Health, and Genetics. (4) Lecture, two hours; discussion, two hours. Study of science, health, and genetics topics from lesbian, gay, bisexual, and transgendered studies perspective. P/NP or letter grading.

185. Selected Topics in Lesbian, Gay, Bisexual, and Transgender Studies. (4) Lecture, four hours; discussion, three hours. Study of selected topics in lesbian, gay, bisexual, and transgender studies. Consult Schedule of Classes for topics and instructors. May be repeated for credit with consent of instructor. P/NP or letter grading.

186. Selected Topics in Lesbian, Gay, Bisexual, and Transgender Studies. (4) Lecture, four hours; discussion, three hours. Study of selected topics in lesbian, gay, bisexual, and transgender studies. Consult Schedule of Classes for specific term. May be repeated for credit with topic or instructor change. P/NP or letter grading.

187. Topics in Queer Literatures and Cultures. (5) (Same as English M191D and Gender Studies M191D.) Seminar, three or four hours. Enforced requisite: English Composition 3 or 3H. Consult Schedule of Classes for topics in specific term. May be repeated for credit with topic or instructor change. P/NP or letter grading.

189. Research Group or Internship Seminars: Lesbian, Gay, Bisexual, and Transgender Studies. (2) Seminar, two hours. Preparation: completion of course toward minor. Requisite: course M114. Corequisites: courses 195. Designed for seniors who are doing internships in lesbian, gay, bisexual, or transgender organization. May be repeated for credit with topic or instructor change. P/NP or letter grading.

190. Community or Corporate Internships in Lesbian, Gay, Bisexual, and Transgender Studies. (4) Tutorial, one hour. Preparation: completion of course toward minor. Requisite: course M114. Corequisite: course 194. Limited to seniors. Internship in supervised setting in lesbian, gay, bisexual, or transgender community organization. Students must maintain 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.

191. Individual Studies in Lesbian, Gay, Bisexual, and Transgender Studies. (2 to 4) Tutorial, one hour. Requisite: course M114. Limited to juniors/seniors. Directed program of independent study or research on specific topic within lesbian, gay, bisexual, and transgender studies, with scheduled meetings to be arranged between faculty member and student. Tenable evidence of mastery of subject matter required. May be repeated for credit. Individual contract required. P/NP or letter grading.

Scope and Objectives

Students who wish to study life sciences have a choice of eight majors, all of which lead to a Bachelor of Science degree: Biology, Ecology, Behavior, and Evolution, and Marine Biology (Ecology and Evolutionary Biology Department), Microbiology, Immunology, and Molecular Genetics (Microbiology, Immunology, and Molecular Genetics Department), Molecular Cell, and Developmental Biology (Molecular Cell, and Developmental Biology Department), Neuroscience (Neuroscience Interdepartmental Program), Physiological Science (Integrative Biology and Physiology Department), and Psychology 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 departmental 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 and other information. Because the core curriculum prepares them for any of the eight majors, they have the flexibility to switch to another life sciences major at any time during their progression through the core curriculum. Note: The Marine Biology and Psychology 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,
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 evolutionary, ecological, and physiological relationships. P/NP or letter grading.

2. Cells, Tissues, and Organs. (4) Lecture, three hours; discussion, 75 minutes. Enforced requisites: Chemistry 14A or 20A. Introduction to basic principles of cell structure, organization of cells into tissues and organs, and principles of organ systems. Letter grading.


4. Introduction to Molecular Biology Laboratory. (1) Laboratory, three hours; discussion, one hour. Enforced requisites: course 3.  Introductory wet-laboratory designed to prepare students for upper division laboratory courses for all life sciences departments. Use of web-laboratory/bioinformatics methods and tools applicable in variety of biological fields, molecular biology, bioinformatics, and functional genomics. Students conduct inquiry-based laboratory experiments and learn basic wet-laboratory skills to guide them to refine their skills to write their own laboratory reports and to work in groups as team. Letter grading.

5. 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 parallels core 3, but at a more advanced level. Letter grading.


10H. Research Training in Genes, Genetics, and Genomics. (6) Lecture, 90 minutes; laboratory, six hours; computer laboratory, 90 minutes. Limited to 30 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 science majors. Topics include chemistry of life, genetics, physiology, evolution, and ecology. All enrolled in lecture and debates, with a writing component. P/ NP or letter grading.

23L. Introduction to Laboratory and Scientific Methodology. (2) Laboratory, two three-hour discussions, one hour. Enforced requisites: course 2. Must be taken concurrently with either course 3 or 4. Introduction to 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.

32A. Introduction to Biostatistics. (3) Lecture, three hours; laboratory, two hours. Development of intuition and problem-solving skills and intuition in genetics. Part of Undergraduate Research Consortium in Functional Genomics. Letter grading.

30A Mathematics for Life Scientists. (5) Lecture, three hours; laboratory, one hour. Preparation: three years of high school mathematics to algebra II. Some familiarity with computer programming. Mathematical modeling as tool for understanding dynamics of biological systems. Fundamental concepts of single-variable calculus and development of single- and multi-variable differential equation models of dynamical processes in ecology, physiology, and other subjects in which quantities change with time. Use of free computer program Sage for problem solving, plotting, and simulation. Letter grading.

30B. Math for Life Sciences Majors. (5) Lecture, three hours; laboratory, two hours. Enforced requisites: course 30A. Introduction to concept of matrices and linear transformations to equip students with some basic tools to understand dynamics of multivariable nonlinear systems. Examples from ecological, physiological, chemical, and other systems. Letter grading.

97. Variable Topics in Life Sciences. (1 to 4) Seminar, two to four hours. Consent of instructor. Op in research and/ or development in life sciences. Consult Schedule of Classes for topics and instructors. May be repeated once for credit with consent of instructor. P/ NP or letter grading.

98X. PEERS Collaborative Learning Workshops for Life Sciences Majors. (1) Laboratory, three hours. Corequisites: associated undergraduate lecture course in life sciences. Development of intuition and problem-solving skills in collaborative learning environment. May be repeated three times, but only 1 unit may be applied toward graduation. P/NP grading.

Upper Division Courses

100HA-100HB-100HC. Advanced Research in Genes, Genetics, and Genomics. (4-4-4) Lecture, two hours; laboratory, 10 hours. Requisite: course 10H. Course 100HA is requisite to 100HB, which is requisite to 100HC. Designed for undergraduates who are committed to pursuing research. Advanced research training in genetics, cell and developmental biology, bioinformatics, functional genomics. Techniques include electron microscopy, other light microscopy, immunohistochemistry, and confocal microscopy. Part of Undergraduate Research Consortium in Functional Genomics sponsored by Howard Hughes Medical Institute Professors Program. Letter grading.
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](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 or graduate courses, including Linguistics 103, 110, 120A, 120B, 130 or 132, and two courses from 120C, 155A, 165B (students may substitute courses 200A and 200B for 165A and 165B respectively if they receive grades of A in 120A and 120B respectively and have consent of instructor). Both courses 165A and 165B, or 200A and 200B, are recommended for students planning linguistics graduate work. The remaining four courses are electives, three of which must be linguistics courses (no more than one course from 197, 198A, and 199 may be applied toward the major). The other course may be in linguistics or in another field as follows: Anthropology 143, Classics 180, English 113A, 113B, Philosophy C127A, C127B, 172,
Psychology 120A, 124E, 133C, or an upper division course in a foreign language beyond the sixth term. Nonlinguistics courses not on the list may be used as electives only in consultation with an adviser.

Linguistics 198A and 198B, or 198, are recommended for students planning to pursue graduate work in linguistics, since they provide an opportunity to engage in independent research and to write a paper that can be submitted to graduate admissions committees. To enroll in the courses, students must consult with the department's senior essay and honors counselor.

Linguistics and Anthropology B.A.

Preparation for the Major

Required: Linguistics 20, completion of the equivalent of the sixth term of one foreign language and the third term of a second foreign language (at least three terms must be in a language other than those in the Romance, Slavic, and Germanic families). Anthropology 33 is strongly recommended, when offered.

Transfer Students

Transfer applicants to the Linguistics and Anthropology major with 90 or more units must complete as many of the following introductory courses as possible prior to admission to UCLA: one introduction to linguistics course, two years of one foreign language and one year of a second foreign language (at least one year must be in a language other than those in the Romance, Slavic, or Germanic families). One cultural and communication course is strongly recommended.

Refer to the UCLA Transfer Admission Guide 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, 110, 120A, 120B, 165A or 165B, one upper division elective in linguistics, French 100, 101, 105, 107, and one elective upper division French course beyond the sixth term.

Linguistics and 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.

The Major

Required: Twelve upper division courses as follows: Linguistics 103, 110, 120A, 120B, 165A or 165B (or 200A or 200B with a grade of A in 120A or 120B respectively and consent of instructor), one upper division elective in linguistics, English 113A, 113B (or Applied Linguistics C116), 120, and three electives from 140A, 140B, 150A, 150B, 151, the 150 series (one course only), the 160 series (one course only), the 170 series (one course only).

Linguistics and French 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.

The Major

Required: Twelve upper division courses as follows: Linguistics 103, 110, 120A, 120B, 165A or 165B, one upper division elective in linguistics, French 100, 101, 105, 107, and one elective upper division French course beyond the sixth term.

Linguistics and Italian B.A.

Preparation for the Major

Required: Linguistics 20, Italian 1, 2, 3, 4, 5, 6, Latin 1, 2, 3, one cultural anthropology course.
Transfer Students
Transfer applicants to the Linguistics and Italian major with 90 or more units must complete as many of the following introductory courses as possible prior to admission to UCLA: two years of Italian, one year of Latin, one introduction to linguistics course, and one cultural anthropology course.

Refer to the UCLA Transfer Admission Guide 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 (or 200A or 200B with a grade of A in 120A or 120B respectively and consent of instructor), two upper division electives in linguistics, Italian 102A, 180, and three upper division electives in Italian.

Linguistics and Philosophy B.A.
Preparation for the Major
Required: Linguistics 20, Philosophy 31, and two courses from 1, 6, 7, 21, completion of the equivalent of the sixth term of one foreign language and the third term of a second foreign language.

Transfer Students
Transfer applicants to the Linguistics and Philosophy major with 90 or more units must complete as many of the following introductory courses as possible prior to admission to UCLA: one introduction to linguistics course, two symbolic logic courses and two courses from Western philosophy, political philosophy, philosophy of mind, or skepticism and rationality, 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.

The Major
Required: Twelve upper division courses 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: Twelve upper division courses as follows: Linguistics 103, 110, 120A, 120B, 165A or 165B (or 200A or 200B with a grade of A in 120A or 120B respectively and consent of instructor), one upper division elective in linguistics, 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 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: Twelve upper division courses as follows: Linguistics 103, 110, 120A, 120B, 165A or 165B, one additional upper division course in linguistics, Spanish 100A, 100B, 119, 160, and two additional upper division Spanish courses.

Honors Program
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 198A and 198B or in 199. Qualified students may be proposed by any member of the faculty to the faculty as a whole for the award of highest honors on the basis of a piece of research in linguistics completed at UCLA.

Computing Specialization
Students in any of the 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 who have completed an introductory linguistics course and wish to pursue more advanced study in linguistics. Students pursuing the minor may choose either an upper division course as the capstone course or a research project in linguistics. The minor requires at least 18 units of linguistics courses, including one upper division course in linguistics.

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 185B, and an additional elective linguistics course, which may be upper or lower division.

A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor.

Each minor course must be taken for a letter grade, and students must have an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

Graduate Study
Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website, http://grad.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.

American Sign Language
Lower Division Courses

Upper Division Courses
M115. Enforcing Normalcy: Deaf and Disability Studies. (Same as Disability Studies M115.) Lecture, three hours. Exploration of historical, medical, social, political, philosophical, and cultural influences that have constructed categories of normality, disability, and deafness. Building on writing of Michel Foucault and critical work in field of disability studies, inquiry into institutions that have enforced standards of normalcy throughout 19th and 20th centuries to present. Primary attention to rise of medical authority in West, history of eugenics, and contemporary bioethics issues confronting disability and deaf communities. P/NP or letter grading.

M120. History of Deaf Communities in America. (4) (Same as History M147E.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Study of history and culture of deaf communities in America (circa 1800 to present) by exploring major events impacting deaf people, including development of sign language, deaf education, autisms, politics of deafness, eugenics, deaf revolution movements, and role of hearing technology. Historical development of emergence, growth, and survival of America’s deaf community and development of deaf identity over time. P/NP or letter grading.

121. History of Mass Media and Deaf Community. (4) Lecture, three hours. Historical survey of mass media (print, film, television, and Internet) as sources and interpreters of deafness within context of U.S. social and cultural history. Examination of historical changes in products of mass media within deaf community and ways of critiquing media sources. P/NP or letter grading.

Indigenous Languages of the Americas
Lower Division Courses

Upper Division Courses
119A-119B-119C. Advanced Quechua. (4-4-4) Lecture, five hours. Requisite: course 118B, which is enforced requisite to 118C. Informal and research topics. P/NP or letter grading.

191. Variable Topics Research Seminars: Indigenous Languages. (2 or 4) Seminar, three hours. Research seminars on selected topics on various indigenous languages. Reading, discussion, and development of culminating project. May be repeated for credit with topic change. P/NP or letter grading.

Graduate Course
596. Directed Studies in Quechua. (1 to 8) Tutorial, to be arranged. Requisite: 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. (8) 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 evolution 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, 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 could evolve, and how particular languages, as cultural artifacts, survive and change so rapidly. P/NP or letter grading.
5. World Languages. (5) Lecture, four hours; discussion, one hour. Introduction to linguistic diversity of world and to such core areas of linguistics as study of sound production and patterning (phonetics and phonology), word formation (morphology), and sentence formation (syntax). Structural characteristics of world languages and methods of classifying languages into families and types. Detailed discussion of representative languages with audiovisual illustrations to acquaint students with distinctive features of several key language families. Discussion of such linguistic concepts as pidgins and creoles, unaffiliated languages, language contact, and language endangerment, together with related sociopolitical issues. P/NP or letter grading.
6. Out of 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 toddlers at their first few weeks, months, and years and how children acquire verbal language, understanding. P/NP or letter grading.

191. Variable Topics Research Seminars: Indigenous Languages. (2 or 4) Seminar, three hours. Research seminars on selected topics on various indigenous languages. Reading, discussion, and development of culminating project. May be repeated for credit with topic change. P/NP or letter grading.

Graduate Course
596. Directed Studies in Quechua. (1 to 8) Tutorial, to be arranged. Requisite: 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.
97. Variable Topics in Linguistics. (1 to 4) Seminar, three hours; fieldwork, two hours. Variable topics offered to 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 world. Extensive practice in perception and production of such phenomena. P/NP or letter grading.


105. Morphology. (5) Lecture, four hours; discussion, one hour. Enforced requisite: course 20. In linguistics, morphology is study of word structure. Morphological theory seeks to answer questions such as how syllables and words and their components (roots, prefixes, suffixes, vowels, change) are classified crosslinguistically? how do speakers store, produce, and process complex words? How do speakers know how to produce correct word forms even when they have not previously heard them and how do speakers know that particular words are well-formed? If a form 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. Recommended: course 104 or 204A. Survey of historical theory for English and other languages, with particular emphasis on phonological models of internation. Laboratory equipment used for recording and analyzing internation, and students learn to transcribe internation data. P/NP or letter grading.

114. American Indigenous Linguistics. (5) Lecture, four hours; discussion, one hour. Strongly recommended preparation: course 20. Survey of genetic, areal, and typological classifications of American indigenous languages; writing systems for American indigenous languages; American indigenous languages in social and historical context. One or more languages may be investigated in detail. P/NP or letter grading.


120A. Phonology I. (5) Lecture, four hours; discussion, one hour. Requisites: courses 20, 103. Introduction to phonological theory and analysis. Rules, representations, underlying forms, derivations. Justification of phonological theory on practical skills with problem sets. P/NP or letter grading.

120B. Syntax I. (5) Lecture, four hours; discussion, one hour. Requisite: course 20 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 formalizations. 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: course 20. 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/location/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.

C122A-C122B. Romance Syntax: French. (4-4) Lecture, four hours. Preparation: some knowledge of French (or one Romance language). Enforced requisite: course 120B. Course C122A is enforced requisite to C122B. Course C122A focuses on French language, with emphasis on properties of construction not found in English. Concurrently scheduled with course C222A-C222B. 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 in language development in children. Discussion and examination of child language data from English and other languages. Emphasis on unspoken rules of language development. Topics include infant speech perception and production, development of phonology, morphology, syntax, and word meaning. P/NP or letter grading.

132. Language Processing. (5) Lecture, four hours; laboratory, one hour. Requisite: courses 20, 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, anaphora and inferencing, speech error models, 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 1 or 20, and 130. Examination of relationship between brain, language, and link between evidence preserved in neural structure and that from atypical language development and language disorders in the mature brain. Topics include methodological issues in investigating neural basis for language and children and adults with acquired and/or congenital language disorders. Concurrently scheduled with course C235B. P/NP or letter grading.

C140. Bilingualism and Second Language Acquisition. (5) Lecture, four hours; discussion, one hour. Requisites: courses 120A, 120B, 130. Introduction to 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 C244B. 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; relation of habitual thought and behavior to language; and language and classification of experience. Holistic approach to study of language, with emphasis on the relationship between language and other forms of cognition, including cognitive development, and social anthropology, as well as psychology and social anthropology. 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 reconstructed Indo-European proto-language. One or more Indo-European languages may be investigated in detail. P/NP or letter grading.

160. Field Methods. (5) Lecture, four hours; discussion, one hour. Requisite: courses 103, 120A, 120B. Analysis of language unknown to members of class from data elicited from native speaker of that language. P/NP or letter grading.

161. Language Documentation. (5) Lecture, four hours; discussion, one hour. Requisites: courses 20 (enforced), and 105 or 120A. Issues in documenting languages, including collection of primary data using linguistic field methods, organizing data into documents (annotated texts, dictionaries, multimedia presentations, technical articles), audiences for language documents (speakers of target languages, linguists, scholars outside linguistics, general public), presentation and storage of documentation (on-line publication, physical and electronic archives), documenting endangered languages, and organizing and initiatives for documenting endangered languages and dialects. Students undertake projects in assembling primary data and creating annotated texts with commentary. P/NP or letter grading.

165A. Phonology II. (5) Lecture, four hours; discussion, one hour. 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; modern theoretical, syntactic, 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, and syntax and semantics. P/NP or letter grading.

165C. Semantics II. (5) Lecture, four hours; discussion, one hour. Requisite: course 120C. Recommended for students who plan to do graduate work in linguistics. Further study of relations between sentences, lexical semantics, and intensionality. P/NP or letter grading.

170. Language and Society: Introduction to Socio-linguistics. (4) Lecture, four hours; discussion, one hour (when scheduled). Requisite: course 20. Study of patterned covariation of language and society; social dialects and social styles in language; problems of multilingual societies. P/NP or letter grading.

175. Linguistic Change in English. (5) Lecture, four hours. Requisites: courses 110, 120A, 120B. Principles of linguistic change as exemplified through detailed study of history of English pronunciation, lexicon, and syntax. P/NP or letter grading.


M177. Structure of Korean. (4) (Same as Korean CM120.) Lecture, three hours; discussion, one hour. Recommended preparation: two years of Korean or courses 20, 105, 120A. History and structure of Korean, and their relation to other Indo-European languages. P/NP or letter grading.

M178. Language in Society: Introduction to Socio-linguistics. (4) Lecture, four hours; discussion, one hour (when scheduled). Requisite: course 20. Study of patterned covariation of language and society; social dialects and social styles in language; problems of multilingual societies. P/NP or letter grading.
pragmatic characteristics of Korean in light of linguistic universals, with brief introduction to formation, typological analysis, and phonological structure of Korean.


185A. Computational Linguistics I. (5) Lecture, four hours; laboratory, one hour. Recommended: courses 120B, 185B, or equivalent in computer science. Survey of recent work on natural language processing, including basic syntactic parsing strategies, with brief glimpses of representation, reasoning, and response generation. P/NP or letter grading.

185B. Computational Linguistics II. (5) Lecture, four hours; laboratory, one hour. Recommended: course 185A. Extensions of basic language processing techniques to natural language processing. Recent models of syntactic, semantic, and discourse analysis, with particular attention to their linguistic sophistication and psychological plausibility. Letter grading.

191A. Variable Topics Research Seminars: Linguistics. (4) Seminar, three hours. Recommended: course 1 or 20. Research seminar on selected topics. Reading, discussion, and development of culminating project. May be repeated for credit with topic change. P/NP or letter grading.

191B. Variable Topics Research Seminars: Linguistics. (2 or 4) Seminar, 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 Linguistics. (4-2) Seminar, seven hours (course 192A) and six hours (course 192B); laboratory, two hours. Recommended: completion of both courses 185A and 185B or 208. Training and supervised practicum for advanced undergraduate students to assist in linguistics courses. Students assist in preparation of materials and development of innovative programs under guidance of faculty members and teaching assistants. May not be applied toward course requirements for any Linguistics Department major. Individual contract required. Information and contracts may be obtained from Linguistics Department. P/NP grading.

197. Individual Studies in Linguistics. (2 to 4) Tutorial, four hours. Recommended: course 1 or 20. 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.

198A. Honors Research in Linguistics I. (4) Tutorial, to be arranged. Preparation: 3.5 grade-point average. Recommended: course 165A (or 200A) or 165B (or 200B). Completion of both courses 165A (or 200A) and 165B (or 200B) by the end of the course or during term in which course 165B is taken. Limited to juniors/seniors. Development of honors thesis or comprehensive research project on linguistic topic selected by student in conjunction with direct supervision of faculty member. Consult professor in charge to enroll. May be repeated for credit. Individual contract required. In Progress grading (credit to be given only on completion of course 198B).

198B. Honors Research in Linguistics II. (2) Tutorial, to be arranged. Preparation: course 198A. Limited to juniors/seniors. Completion of honors thesis or comprehensive research project begun in course 198A under direct supervision of faculty member. Consult professor in charge to enroll. May be repeated for credit. Individual contract required. Letter grading.

199D. Directed Research. (Recommended 20 credits) Research. P/NP or letter grading.

Graduate Courses


200B. Syntactic Theory I. (4) Preparation: graduate-level linguistics student or grade of A in course 192B or equivalent course in syntax. In-depth introduction to selected topics in current thinking on word structure and syntax of predicates, arguments, and grammatical relations. Topics include levels of representation, X-bar theory, case theory, thematic roles, the lexicon, grammatical function-changing rules, head-complement relations.

200C. Semantic Theory I. (4) Lecture, four hours. Recommended: course 180 or 208. Overview of current results and research methods in linguistic semantics. Topics include general quantifiers and semantic universals, predicate argument structures, variable binding and pronounization, formal semantic interpretation, syntax and LF, tense, ellipsis, and focus. Letter grading.

201A. Phonological Theory II. (4) (Formerly numbered 210) Lecture, four hours. Recommended: course 200A. Continuation of course 200A. Second course in two-course survey of current research in phonological theory. Topics include autosegmentalism (tone, tiers, segment structure), feature theory, underspecification, prosodic morphology. S/U or letter grading.

201B. Syntactic Theory II. (4) (Formerly numbered 201B) Lecture, four hours. Recommended: course 200B. In-depth introduction to selected topics in theory of movement processes and topics selected from following areas: WH-movement and related rules, subjunction and other current theories, ECP and related conditions on distribution of empty categories; resumptive pronoun constructions; parametric variation in movement constructions; LF WH-movement; filters; reconstruction; pronominal gaps; barrier theory; control theory; null subject parameter. S/U or letter grading.


203. Phonetic Theory. (4) Preparation: course 120A. Preliminaries to speech analysis. Functional anatomy of vocal organs; fundamental principles of acoustics and of acoustic theory of speech production; issues in perception of speech; nature and design of feature systems for phonetic and phonological analysis.

204A. Experimental Phonetics. (4) Lecture, three hours. Preparation: course 103. Use of laboratory equipment to investigate articulatory, acoustic, and perceptual properties of speech. Topics include experimental design and statistics; theoretical basis of acoustic structure of speech sounds; computer-based speech processing, analysis, and modeling; perceptual and acoustic evaluation of synthetic speech.

204B. Speech Production. (4) Lecture, three hours; laboratory, one hour. Preparation: course 104 or 204A. Survey of topics in speech production research, especially as related to linguistic phonetics. Topics include physiology of vocal tract and models of speech production and articulatory/acoustic relations. Emphasis on use of laboratory methods such as aerodynamic transducers, electroglossiography, static and electropalatography, electromagnetic articulography, and imaging techniques. S/U or letter grading.

204C. Speech Perception. (2 to 4) Lecture, four hours. Recommended requisite: course 104 (or 204A) or 111 (or 211). Limited to graduate students. Survey of topics in speech perception research. Topics include auditory physiology and psychophysics, categorical speech perception, and cross-linguistic speech perception and word recognition. Emphasis on use of experimental methods such as lexical decision, gating, priming, eye tracking, phoneme monitoring, and word spotting. S/U or letter grading.


209A. Computational Linguistics I. (5) Lecture, four hours; laboratory, one hour. Survey of recent work on natural language processing, including basic syntactic parsing strategies, with brief glimpses of semantic representation, reasoning, and response generation. S/U or letter grading.

209B. Computational Linguistics II. (5) Lecture, four hours; laboratory, one hour. Preparation: course 209A. Extensions of basic language processing techniques to natural language processing. Recent models of syntactic, semantic, and discourse analysis, with particular attention to their linguistic sophistication and psychological plausibility. S/U or letter grading.

209C. Computational Semantics. (4) Lecture, four hours; discussion; lab. Basic syntactic semantics. Preparation: course 185A or 208A. Study of algorithms to compute and reason with meanings of sentences and texts. Phenomena such as anaphor resolution, presupposition projection, and cross-linguistic objects, and space to be covered. S/U or letter grading.

210A. Field Methods I. (4) Lecture, four hours. Preparation: grade of B or better in course 103 or in examination on practical phonetics. Preparation: courses 200A, 200B. Analysis of a language unknown to members of class from data elicited from a native speaker of the language. Term papers to be relatively full descriptive sketches of the language. May be repeated for credit with topic change. S/U or letter grading.

210B. Field Methods II. (4) Lecture, four hours. Preparation: course 210A in preceding term. Because different languages are investigated in different years, course 210B can only be taken as direct continuation of 210A in same year. When there are multiple sections, continuation must be in same section. May be repeated for credit with topic change. S/U or letter grading. 165B.

211. Intonation. (4) Lecture, two hours; laboratory, two hours. Preparation: course 120A or 204B. Survey of intonational theory for English and other languages, with particular emphasis on computer models of intonation. Laboratory equipment used for recording and analyzing intonation, and students learn to transcribe intonational elements. Letter grading.
212. Learnability Theory. (4) Lecture, four hours. Requisite: course 180 or 208. Survey of some of most significant results on learnability, with emphasis on precise assumptions about their memory, time, and computational power, and precise assumptions about information provided by environment. S/U or letter grading.

213A. Grammatical Development. (4) Requisites: courses 200A, 200B. Recommended: course 130 or 233. Survey of theoretical perspectives and contemporary empirical research in development of syntax and other components of grammar, with particular emphasis on acquisition theory, linguistic theory, and issues of learnability.


213C. Linguistic Processing. (4) Lecture, four hours. Requisites: courses 165B and/or 200B. Recommended: courses 132 or 232, 201B. Survey of theoretical perspectives and contemporary empirical research in human processing of language (comprehension and/or production), with emphasis on syntactic processing, ambiguity resolution, effects of memory load, and relationship between grammar and processor. S/U or letter grading.

214. Survey of Current Syntactic Theories. (4) Lecture, four hours. Requisite: course 200B. Survey of several current syntactic theories, compared with one another and with theory discussed in course 201B, from point of view of theories’ relative descriptive and explanatory power. S/U or letter grading.

215. Syntactic Typology. (2 or 4) Lecture, four hours. Requisite: course 200B. Current results in word-order universals; genetic classification of world’s languages; cross-linguage properties of specific construction types, including relative clauses, passives, positive and negative coreference systems, agreement systems, deixis systems, and types of sentence complements. S/U or letter grading.

216. Syntactic Theory III. (4) Lecture, four hours. Requisite: course 201B. Selected topics on syntactic theories of anaphora and quantification from the following areas: typology of binding categories (pronouns, antecedents, etc.); theory of locality conditions in binding theory; parametric variation in binding; quantifier movement; existential quantification and unselective reading; strong and weak crossover; superiority; scope interactions; complex quantifier structures. S/U or letter grading.

217. Experimental Phonology. (4) Lecture, four hours. Requisite: course 200A. Survey of experimental work that bears on claims about speakers’ knowledge of phonology, including theories of lexical, relation between perception and phonology, and universal markedness relations. Letter grading.

218. Mathematical Structures in Language II. (4) Lecture, four hours. Requisite: course 180 or 208. In-depth study of generalized quantifier theory; selected topics from distinctive feature theory, formal syntax, partial orders and lattices, formal language theory, variational logic, and other readings. May be repeated for credit with consent of instructor. S/U or letter grading.

219. Phonological Theory III. (4) Lecture, four hours. Requisite: course 201A. Current research and issues in phonological theory. Topics include structure of phonological representations, relations between representations, architecture of grammar, and explanations for phonological theory. S/U or letter grading.

220. Linguistic Areas. (4) Requisites: courses 120A, and 120B. Recommended: courses 165A or 200A, 165B or 200B. Analysis and classification of languages spoken in a particular area (e.g., Africa, the Balkans, South Asia, Southeast Asia, Australia, Aboriginal languages of Australia, Iberia, South America, Far East, etc.). May be repeated for credit with topic change.

225. Linguistic Structures. (4) Lecture, four hours. Requisites: courses 120A, and 120B or 127. Recommended: courses 180B or 200B. Phonological and grammatical structure of a selected language and its genetic relationships to others of its family. May be repeated for credit with topic change. S/U or letter grading.

C228A-C228B. Romance Syntax. French. (4–4) (Formerly numbered CM228A-CM228B.) Lecture, four hours. Preparation: some knowledge of French (or one Romance language). Enforced requisite: course 120B. Course C228B is enforced requisite to C228A. Aspects of structure of French language, with emphasis on properties of construction not found in English. Concurrently scheduled with course C1219A-C1219B. S/U or letter grading.

230. History of Linguistics. (4) Requisites: courses 200A, 200B. Aspects of history of linguistics. Different course offerings may deal with different areas of linguistics (e.g., phonology, syntax) or with different historical periods. May be repeated for credit with topic change.

232. Language Processing. (5) Lecture, four hours; laboratory, one hour. Central issues in language comprehension and production, with emphasis on how theoretical and methodological advances in computational and cognitive models are influencing theories. Topics include word understanding (with emphasis on spoken language), parsing, anaphor and inferring, speech errors and sentence production, and comprehension of syntactic structure during production. S/U or letter grading.

233. Language Development. (5) Lecture, four hours; seminar, one hour. Requisites: courses 20, 120A, 120B. Survey of research and theoretical perspectives in language development in children. Discussion and examination of child language data from English and other languages. Emphasis on universals of language development. Topics include infant speech perception and production, development of phonology, morphology, syntax, and word meaning. S/U or letter grading.

C235. Neurolinguistics. (5) Lecture, four hours; discussion, one hour. Requisites: courses 1 or 20, and 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 methodological issues; role of neuroimaging and neuroanatomy; role of language processing in cognitive development; role of language processing in cognitive development; role of language processing in cognitive development. S/U or letter grading.

236. Computational Phonology. (4) Lecture, four hours. Requisite: course 201B. Survey of some of most significant results on computational phonology. S/U or letter grading.

251A. Topics in Phonetics and Phonology. (4) Seminar, four hours. Requisite: course 200B. Course 201A, 203, or 204A may be required. Specialized topics in phonetics and phonology. Meets with course 251B. May be repeated for credit. Letter grading.

251B. Topics in Phonetics and Phonology. (2) Seminar, four hours. Requisite: course 200B. Course 201A, 203, or 204A may be required. Specialized topics in phonetics and phonology. May not be applied toward M.A. or Ph.D. degree requirements. Meets with course 251A. May be repeated for credit. S/U grading.

252A. Topics in Syntax and Semantics. (4) Seminar, four hours. Requisite: course 200B. Course 201B, 201C, 214, or 215 may be repeated for credit. Specialized topics in syntax and semantics. Meets with course 252B. May be repeated for credit. Letter grading.

252B. Topics in Syntax and Semantics. (2) Seminar, four hours. Requisite: course 200B. Course 201B, 201C, 214, or 215 may be repeated for credit. Specialized topics in syntax and semantics. May not be applied toward M.A. degree requirements. Meets with course 252A. May be repeated for credit. S/U grading.

253A. Topics in Language Variation. (4) Seminar, four hours. Requisite: course 110. Course 202 may be repeated for credit. Specialized topics in language variation. Meets with course 253B. May be repeated for credit. Letter grading.

253B. Topics in Language Variation. (2) Seminar, four hours. Requisite: course 200B. Course 201B, 201C, 214, 215, or 216 may be repeated for credit. Specialized topics in language variation. May not be applied toward M.A. degree requirements. Meets with course 253A. May be repeated for credit. S/U grading.

254A. Topics in Linguistics. (4) Seminar, four hours. Requisites: courses 200A, 200B. Course 201, 202, 203, 204A, 205, 206, 207, C208, C209A, 209B, 212, 213A, 213C, 214, 215, 216, or 218 may be required. Individual prosemesters on topics such as child language, sociolinguistics, neurolinguistics, computational linguistics, psycholinguistics, etc. Meets with course 254B. May be repeated for credit. Letter grading.

254B. Topics in Linguistics. (2) Seminar, four hours. Requisites: courses 200A, 200B. Course 201A, 201B, 201C, 202, 203, 204A, 205, 206, 207, C208, C209A, 209B, 212, 213A, 213C, 214, 215, 216, or 218 may be required. Individual prosemesters on topics such as child language, sociolinguistics, neurolinguistics, computational linguistics, psycholinguistics, etc. May not be applied toward M.A. degree requirements. Meets with course 254A. May be repeated for credit. S/U grading.

256A. Topics in Phonetics and Phonology II: Proseminar. (4) Seminar, four hours. Requisite: course 200A. Course 201, 202, 203, or 204A may be required. Specialized topics in phonetics and phonology. May be repeated once for credit. Meets with course 256B. In Progress grading (credit to be given only on completion of course 256B).

256B. Topics in Phonetics and Phonology II: Proseminar. (2) Seminar, two hours. Requisite: course 256A. Specialized topics in phonetics and phonology. May be repeated once for credit. Letter grading.

257A. Topics in Syntax and Semantics II: Proseminar. (4) Seminar, four hours. Requisite: course 256A. Specialized topics in syntax and semantics. May be repeated once for credit. Letter grading.

257B. Topics in Syntax and Semantics II: Proseminar. (2) Seminar, two hours. Requisite: course 256B. Specialized topics in syntax and semantics. May be repeated once for credit. Letter grading.

258. Analyzing Historical Texts. (4) Same as History M266C.) Seminar, four hours. Designed for graduate students. Analysis of linguistic structure and ethnohistorical context of legal and other documents written by native-speaking scribes and translators. Topics include paleographic technique and text analysis software. May be repeated for credit. S/U grading.

M246C. Topics in Linguistic Anthropology. (4) (Same as Anthropology M241.) Problems in relations of language, culture, and society. May be repeated for credit.

411A-411B. Research Orientation. (2-2) Designed for graduate students. Sequence of lectures by de- partment 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. (2) De- signed for graduate students. Workshop in examina- tion 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.

450. College Teaching of Linguistics. (2) Seminar, seminar, three hours. Each course may be tak- en independently for credit. May not be applied to- ward 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 each) Seminar, three hours. Each course may be tak- en independently for credit. May not be applied to- ward M.A. or Ph.D. degree requirements when taken for 2 units. May be repeated for credit. S/U grading.

262A-262B-262C. Seminars: Syntax and Seman- tics. (2 or 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 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: Psycholinguistics/ Neurolinguistics. (2 or 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 In- dian linguistics. Each course may be taken inde- pendently for credit. May not be applied toward M.A. or Ph.D. degree requirements when taken for 1 unit. May be repeated for credit. S/U grading.

275. Linguistics Colloquium. (4) Preparation; com- pletion of M.A. requirements. Varied linguistic topics, generally presentations of research by students, faculty, and visiting scholars. S/U grading.

276. Linguistics Colloquium. (No credit) Designed for graduate students. Same as course 275, but taken without credit by students not presenting a colloqui- um. S/U grading.

275. Teaching Apprentice Practicum. (1 to 4) Semi- nar, to be arranged. Preparation: apprentice personal- employment as teaching assistant, associate, or fellow. Teaching apprenticeship under active guide- ance and supervision of regular faculty member re- sponsible for curriculum and instruction at UCLA. May be repeated for credit. S/U grading.

Management

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Michael Chernov, Ph.D.

Bhagwan Chowdhry, Ph.D.

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Samuel A. Culbert, Ph.D.

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Magali A. Delmas, Ph.D.

Aimee L. Drolet Ross, Ph.D.

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Carla Hayn, Ph.D.

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Sanford M. Jacoby, Ph.D. (Howard Noble Professor of Management)

Uday S. Karmarkar, Ph.D. (Los Angeles Times Professor of Management and Policy)

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Kevin F. McCord, Ph.D.

Sanjog Misra, Ph.D.

Judy D. Olian, Ph.D. (John E. Anderson Professor of Management)

Alfred E. Odom, Jr., Ph.D.

William G. Ouchi, Ph.D. (Sanford and Betty Sigoloff Professor of Corporate Renewal)

Kumar Rajaram, Ph.D.

Richard W. Roll, Ph.D. (Joel Fried Professor of Applied Finance)

Peter E. Rossi, Ph.D. (James A. Collins Professor of Management)

Richard P. Rumelt, D.B.A. (Harry and Elsa Kunin Professor of Business and Society)

Marko Sakakibara, Ph.D.

Rakesh K. Sarin, Ph.D. (Paine Professor of Management)

Hans Schöllhammer, D.B.A.

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Avandhar Subrahmanyam, Ph.D. (Goldyne and Irwin Hearsh Professor of Money and Banking)

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Brett M. Trueman, Ph.D.

Romain T. Wacziarg, M.A., Ph.D.

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Robert F. Foster, M.B.A.
George T. Geis, Ph.D.
Farhad A. Hagigi, Ph.D.
Gerald Nickelsburg, Ph.D.
Peter S. Pao, Ph.D.
James R. Stengel, M.B.A.

Adjunct Associate Professor
Robert M. McCann, Ph.D.

Adjunct Assistant Professors
Anke M. Audenaert, M.A.
Jason C. Hsu, M.Sc., Ph.D.
James Kim, M.Eng., M.B.A.
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 dual Global Executive M.B.A. degrees with the National University of Singapore (NUS) Business School and with the Universidad Adolfo Ibáñez (UAI) in Santiago, Chile, that prepare 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 Accounting Minor

The Accounting minor provides students with a comprehensive accounting background; admission is competitive and based on overall undergraduate GPA, grade-point average, and grades in upper division courses. Students are required to take: Management 120A, 120B, 122, 127A, and 127B. Each preadmission and upper division 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://grad.ucla.edu/gasaa

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), Fully Employed M.B.A. Program (FEMBA), Global EMBA for the Americas (dual degree program with the Universidad Adolfo Ibáñez in Santiago, Chile), and Global EMBA for Asia Pacific (dual degree program with the National University of Singapore Business School). Ten 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.), Management
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. Valuation and recording of asset-related transactions, including cash, receivables, marketable securities, inventories, and long-lived assets. Current liabilities. 1B. Requisite: course 1A. Completion of balance sheet with emphasis on debt and equity, including in-depth introduction to time value of money concepts. Introduction to partnership and individual income tax accounting.

88. Lower Division Seminar: Special Topics in Management. (1-2) Seminar; three hours; outside study, nine hours. Requisite: satisfaction of Entry-Level Writing requirement. Variable topics seminar that examines specific issues or problems and ways that professional management approach study of them. Students define, prepare, and present their own research projects with guidance of professional school faculty member. Letter grading.

Upper Division Courses

107. Business Communications. (4) Process and discipline of effective spoken presentations. Examination and application of classical and contemporary thinking on substance, structure, and delivery of messages. Elements of graphic presentation of data and presentation technology. Students design and deliver informative and persuasive presentations on key management issues. Critique of all efforts; certain efforts to be videotaped for review. P/NP or letter grading.


121. Ethical Leadership in Accounting. (4) Lecture, seven and one-half hours. Not open to freshmen. Review of range of ethical considerations in business decisions involving individuals, corporations, society, and international business. Analysis of cases for presentation and discussion. What is ethical dilemma posed? What is range of possible decisions and band of ethical choices supporting them? Offered in summer only. Decision making, P/NP or letter grading.

122. Management Accounting. (4) Lecture, three hours. Requisites: course 1B, one statistics course. Nature, objectives, and procedures of cost accounting and control; job costing and process costing; accounting for manufacturing overhead; cost budgeting; cost reports; joint-product costing; distribution cost; standard costs; differential cost analysis; profit-volume relationships and break-even analysis. P/NP or letter grading.

123. Auditing. (4) Lecture, three hours. Requisite: course 120B. Comprehensive study of procedures used in verification of financial statements and related information, including ethical, legal, and other professional issues. Auditing of a complete set of financial statements. P/NP or letter grading.


125. Special Applications in Accounting. (4) Requisite: course 120B. Recommended: course 122. Designed for seniors, upper management, a computer program that simulates experience on a senior management team. Under real and sometimes adverse economic conditions, teams must make strategic and tactical decisions, evaluate performance results, and compete for key resources, market share, and business opportunities. Emphasis on theories of return on equity, product life cycles, product line margin analysis, income statement, and other topics that allow students to apply accounting principles learned in previous courses. P/NP or letter grading.


127B. Corporate and Partnership Taxation. (4) Lecture, three hours. Requisite: course 121B. Recommended: course 127A. Study of tax issues arising in formation, organization, and termination of corporations and partnerships. Special emphasis on closely held enterprises, including S corporations. P/NP or letter grading.


128. Special Topics in Accounting. (4) Lecture, three hours. Requisite: course 120B. Selected topics in public accounting, such as audit and fraud examination, mergers and acquisitions, public-company status and going-public process, role of partner, serving entrepreneurial clients, and fund accounting. Discussion of case study of current interest in accounting profession. Business plan preparation. P/NP or letter grading.


132. Financial Planning. (4) Lecture, seven and one-half hours. Not open to freshmen. Application of behavioral finance to domestic world. Biases and simplifying rules of thumb feature prominently in students' real-life decisions, whether they are choosing which wine to buy or deciding whether to get an M.B.A. Effect of these behavioral influences and consideration of some ways to adjust for them, helping people spend wisely, invest for future, and generally live happier lives. How behavioral principles can turn profit by developing new financial services and products for consumers. Offered in summer only. Letter grading.

133. Investment Principles and Policies. (4) Lecture, three hours. Requisite: course 130A. Principles underlying investment analysis and policy; salient characteristics of governmental and corporate securities; policies of investment companies and investing institutions; relation of investment policy to money markets and business fluctuations; security price-making forces; construction of personal investment programs.

134. Options, Futures, and Derivative Securities. (4) Lecture, seven and one-half hours. Not open to freshmen. Introduction to derivative markets. Derivatives are both exchange traded and over-the-counter securities. Derivative markets are world's largest and most liquid. Focus on organization, role, and evolution of put and call options markets, future and forward markets, and their relations, with emphasis on arbitrage relations, valuation, and hedging with derivatives. Full introduction to evolution of modern derivative pricing and hedging theory and practice — from basic features of futures and options to binomial option pricing model and Black-Scholes model for option for stocks, to advanced stock option models, to aspects of measuring volatility, coping with trading costs, and to modifications required to value and hedge variety of other options on different financial plans and exotic options. Offered in summer only. Letter grading.


141. Data and Decisions in Business. (4) Lecture, seven and one-half hours. Not open to freshmen. Business decisions are made in uncertain environment. Introduction to data analysis techniques that are appropriate for generating information useful in decision making and to framework for analyzing decisions based on partial information. Use of models in firms that are most often applicable in business planning and decision making. P/NP or letter grading.

142. Information Technology in Accounting. (4) Lecture, seven and one-half hours. Not open to freshmen. Introduction to role and use of models and modeling in decision making, with focus on important types of models, their formulation and application, and insight and information that may be gained from use of modeling. Enables managers to understand role of quantitative models in firms that are most often applicable in business planning and decision making. P/NP or letter grading.
143. Managerial Operations Management. (4) Lecture, seven and one-half hours. Not open to freshmen. For students interested in pursuing careers in high technology management, specifically as management consultants and executive decision-makers in high technology firms. Fundamental strategies and frameworks for analyzing and evaluating various alternatives to creating, implementing, marketing, and managing new technologies. How to differentiate between product families, market them to tightly focused market segments, and develop effective competitive strategies. Frameworks include technology adoption curve, developing whole products, product platform and product line strategy, program management, managing disruptive technology adoption, target market scenarios, managing through strategic dissonance, and compelling value creation. Studies of high technology cases ranging from semiconductors and online platforms to green vehicles and biotechnology companies. Offered in summer only. Letter grading.

150. Elements of Industrial Relations. (4) Principles and methods of effectively utilizing human resources in organizations. Relationship between social, economic, and other environmental factors and current problems in industrial relations.

151. Business Leadership. (4) Lecture, seven and one-half hours. Not open to freshmen. Designed to enhance student knowledge of and competency in leadership. Conceptual framework grounded in principles and organization behavior. There is no extant model of leadership that has been sufficiently scientifically validated to point of being so dominant that it has driven out all other models.这辈子。Lecture focused on leadership with emphasis on development of skills that support effective leadership. Combination of readings, lectures, cases, experiential exercises, and class discussion to allow students to determine their own leadership strengths and limitations, and to develop plans for maintaining/enhancing their strengths and overcoming their limitations. Offered in summer only. Letter grading.

152. Business Strategy. (4) Lecture, seven and one-half hours. Not open to freshmen. Fundamentals of business strategy and corporate strategy and designed to introduce wide variety of modern strategy frameworks and tools including market and assessing attractiveness of markets, defining and evaluating strategic opportunity firms within those markets, and implementing organization that can deliver on that strategy. Emphasis on perspective of general managers who have overall responsibility for performance of firms or business units within firms. Development of general management perspective to understand fundamental concepts in leading through organizations and people. Offered in summer only. Letter grading.

153. Human Resources. (4) Lecture, seven and one-half hours. Not open to freshmen. Systematic exposure to management of human resources (HR). This course provides enhancement knowledge of HR management and ability to apply that knowledge to a variety of decision situations. Management of human resources for competitive advantage. Topics include HR management strategy, HR and business performance, selecting and retaining human capital, employee engagement and branding, compensation and reward systems, motivating and managing performance, human resource management, leadership development and succession planning, and organizational change. Offered in summer only. Letter grading.

154. Management of Organizations. (4) Lecture, seven and one-half hours. Not open to freshmen. Introduction to strategic and operating issues and decisions involved in managing business and operational processes within enterprises. Operational processes are ones that use organization’s resources to transform inputs into goods, then utilizes them to provide services, or does both. Provides students with conceptual frameworks and set of analytical tools to enable them to better understand why processes behave as they do and to involve them in organization’s defining strategic decisions — those related to key processes affecting organizational unit’s performance. Offered in summer only. Letter grading.

155. Organizational Behavior. (4) Lecture, seven and one-half hours. Not open to freshmen. Designed to provide practical guide to managing behavior in organizations, drawing on social science theories to identify key human tendencies that pose obstacles to organizational effectiveness. Topics include challenges of making decisions effectively, motivating others to implement one’s vision, managing groups and teams, and influencing those who resist ideas. Exploration of these issues using readings, cases, lectures, discussions, guest speaker, and experiential exercises. Why smart people make bad decisions, use and abuse of authority, extrinsic and intrinsic motivation, performance management, group formation, group processes, explicit and implicit prejudice, stereotypes and their consequences, principles of persuasion and negotiation. Offered in summer only. Letter grading.

175. Elements of Real Estate and Urban Land Economics. (4) Examination of business decision making as related to logistical forces shaping cities and influencing real estate market forces and land uses. Emphasis on decision making as it relates to appraisals, 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 relationships. Understanding oneself as a leader and others as individuals and as members of working groups. Understanding of group process, including group leadership. Lectures and “sensitivity training” laboratory.

185. Community or Corporate Internship in Management. (2 to 4) Tutorial, to be arranged. Limited to juniors/seniors. Internship in supervised setting in community agency or business. Students meet on regular basis with instructor and provide periodic reports of their experience. Course may be repeated for a maximum of 8 units. Individual contract with supervising faculty member required. P/NP or letter grading.

199. Directed Research in Management. (2 to 8) Tutorial, to be arranged. Limited to juniors/seniors. Supervised independent investigation of selected research topic 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. Advanced Microeconomics. (4) Seminar, three hours. Requirements: course 405. Examination of consumer and organizational interaction. Topics include basic economic concepts, microeconomic models, game theory, concepts of profit maximization, probability and statistics, the role of price in resource allocation, and applications of the theory of supply and demand. Offered in fall or spring. Letter grading.

201A. Business Forecasting: Turning Numbers into Knowledge. (4) Discussion, three hours. Preparatory course: familiarity with linear regression. Examination of one approach to analytical thinking — forcing numerical and textual data into carefully formulated alternative models. Data studied include macroeconomic variables (GDP, inflation, unemployment, interest rates, and exchange rates), industry data, and financial data. Letter grading.


202B. Economic Consulting and Applied Managerial Economics. (4) Lecture, three hours. Requirements: courses 402, 405. Use of economic methods to analyze and solve problems. Examination of the political and social determinants of economic models. Solution of economic problems in a variety of policy situations. Offered in fall or spring. Letter grading.

203A. Economics of Decision. (4) Discussion, three hours. Preparation: basic probability theory. Basics of single-person decision theory and introduction to noncooperative game theory. Examination in some detail of von Neumann/Morgenstern expected utility theory. Other topics in decision theory include subjective expected utility theory and departures from expected utility behavior. S/U or letter grading.


205B. Market Power, Mergers, and Antitrust. (4) Lecture, three hours. Requirements: course 405. Topics in applied industrial organization, including merger policy, differentiated product demand, market power, and Department of Justice and Federal Trade Commission Merger Guidelines. Examination of issues in antitrust based on law and economics, with emphasis on practice and measurement. S/U or letter grading.

205C. Business Forecasting for Foreign Economies. (4) Requirements: course 201A. Forecasting changes in business activity, population, industrial structure, productivity, and Gross Domestic Product components for selected countries. S/U or letter grading.

207. Resource Administration of Nonmarket Activities. (4) Seminar, three hours. Requirements: course 405. Examination of behavior of managers in profit vs. not-for-profit sectors to determine critical variables that explain observed differences in behavior. Use of methodology of microeconomics, particularly utility maximization.

208. Public Services and Private Functions. (4) Requirements: courses 405 and 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 and private sector in financing and providing public services.

M209. Elements of Economic Organization. (1 to 8) (Same as Law M239.) Lecture, three hours. Preparations: familiarity with basic vocabulary and concepts, including basic principles of accounting and valuation. Advanced course in business organization. Examination of structure of business transactions and allocation of control, risk, and return. Topics include various forms of business organization, banking, real estate, and insurance. Letter grading.

21B. Statistical Methods in Management. (4) Discussion, three hours. Requisites: course 402. Introduction to parameter and interval estimation, simple and multiple linear regression and correlation, fixed, random, and mixed models, and nonparametric statistics, all as they apply to management studies. S/U or letter grading.

21C. Introduction to Multivariate Analysis. (4) Discussion, three hours. Preparation: working knowledge of differential and integral calculus, linear vari- ables, basic probability theory, and univariate mathe- matical statistics. Introduction to use of multivariate models in management research to organize and re- present information; interpretation of coefficients from multivariate exploratory models (e.g., principal axes and factor analysis models); survey of multivariate statistical procedures (e.g., multiple discriminant anal- ysis, multivariate analysis of variance, canonical cor- relation, and confirmatory factor models). S/U or letter grading.

214. Managerial Decision Making. (4) Lecture, three hours. Preparation: principles of rational judgment and choice, common behavioral biases of managers and consumers, and adaptive models of perception and behavior, and decision theories. Examination of structure of business trans- actions, as is often the case in real applications. Focus on decision making under uncertainty or complex situa- tions where models are large and have special structure, as is often the case in real applications. Fo- cus on ways of exploiting special structures with combinatorial, multidimensional, and stochastic as- pects in pursuit of computable tractability. S/U or letter grading.


215D. Time-Series Analysis. (4) Discussion, three hours. Requisites: course 213B. Univariate Box-Jen- kins analysis, transfer functions, and intervention analysis. Relationship between econometric and time-series models, Granger causality, multiple time-series analysis, Non-parametric approaches in modeling and forecasting, S/U or letter grading.

216. Simulation of Modeling and Analysis. (4) Discussion, three hours. Preparation: probability theo- ry, mathematical statistics, analytical modeling. De- velopment of computer simulation models for mana- gerial decision making under uncertainty or complex dynamics, with emphasis on simulation methodology such as design, validation, operating procedures, and interpretation of results. Application areas include finance, marketing, and production. S/U or letter grading.

217. Decision Analysis. (4) Lecture, three hours. Preparation: course 402. Managerial decision making occurs in presence of uncertainty which can be about events over which no individual has any control or it can be about what other individuals will do. Frame- work provided for analyzing such deci- sions, with application of framework to such scenar- ios as product development, litigation, business of real estate, and bidding. S/U or letter grading.

218. Game Theory. (4) Lecture, three hours. Preparation: course 405. Theory of games plays increasingly important role as source of clear lan- guage and concepts for analysis of policy problems in every area. Introduction to subject, with emphasis on interpretation and application of ideas to variety of practical issues in management and public policy, and in practical questions of ethics, fairness, and bar- gaining. S/U or letter grading.

219. Cost Accounting and Incentives. (4) Lecture, three hours. Preparation: course 403. Use of basic mi- croeconomics 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 re- cursose planning, pricing, product quality, and general man- agement. S/U or letter grading.

220. Business Law for Managers and Entrepre- neurs. (4) Lecture, three hours. Introductory course that uses practical approach to teach students to rec- ognize, understand, and manage legal issues. Topics include contract law, litigation process and alterna- tive dispute resolution, corporate law, employment law, and intellectual property, real property, corporate law, employment law, collateralized lend- ing, and bankruptcy reorganizations. How to deal with potential legal issues before they become serious problems. S/U or letter grading.

221. Decision Sciences Models I. (4) Lecture, four hours. Preparation: course 407, Mathematics 21B. Broad survey of deterministic models of decision sci- ences, including solution methods and applications management. Solution methods include linear pro- gramming, network analysis, integer program- ming, nonlinear programming. Application areas in- clude corporate planning, finance, marketing, produc- tion and operations management, distribution, and project management. S/U or letter grading.


223A. Intermediate Probability and Statistics. (4) Discussion, three hours. Preparation: working knowl- edge of differential and integral calculus of several variables, basic probability theory, and univariate mathe- matical statistics. Introduction to probability theory and hypothesis testing as applied to manage- ment. SAS programs used in this course and its se- quels. S/U or letter grading.


224. Decision Sciences Models III. (4) Lecture, three hours. Preparation: course 210A, Statistics 100A. Topics include Poisson pro- cesses, renewal theory, Markov chains, and Markov decision processes, with emphasis on problem for- mulation, decision making, and characterization of optimal policies. Applications include traditional opera- tional research topics (inventory, queueing, maintenance, reliability), as well as several in micro- economics (search and research and development). S/U or letter grading.

225. Law and Management of Nonprofit Organi- zations. (4) (Formerly numbered 225S.) (Same as Public Policy M225.) Lecture, three hours. Introduction to important legal, financial, and management issues confronting nonprofit organizations. Topics include how to start nonprofit tax-exempt organizations, qual- ifying and maintaining tax-exempt status under IRC Code Section 501(c)(3), corporate law, employment law, collateralized lend- ing, and bankruptcy reorganizations. How to deal with potential legal issues before they become serious problems. S/U or letter grading.


227. Corporate Accounting. (4) Lecture, three hours. Preparation: 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 re- cursose planning, pricing, product quality, and general man- agement. S/U or letter grading.

229A. Special Topics in Accounting. (4) Lecture, three hours. Designed for Ph.D. students. Examination in a particular issue of current importance in accounting, such as application of information economics and principal-agent model to accounting.


229X-229Y-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 interchange encouraged through discussion of papers during colloquium. May be repeated for credit. S/U grading.

230. Theory of Finance. (4) Lecture, three hours. Requisites: course 408. Primary focus on valuation of corporate liabilities and other securities under uncertainty. Capital asset pricing model presented rigorously and compared with more recent theories of asset pricing such as arbitrage pricing theory and option pricing model, using empirical evidence. Secondary focus on analysis of problems in corporate finance such as optimal financing of the corporation and the market for corporate control in leading to economic restructuring of firms. Involves discussion of reasons why market valuation cannot be used as criterion, and sources of funds for nonprofit organizations. Use of cases. S/U or letter grading.

231A. Topics in Corporate Finance. (4) Lecture, three hours. Requisites: courses 230 (or 430), 408. Identifying and solving financial problems through use of cases. Application of financial theory and financial techniques to business problems, using written reports and classroom discussion. S/U or letter grading.

231B. Nonprofit Sector Financial Policy. (4) Lecture, three hours. Requisites: courses 408, 430. Identifying and solving financial problems for all types of nonprofit organizations, with attention to funds accounting, budgeting and control, investment decision making and when market valuation cannot be used as criterion, and sources of funds for nonprofit organizations. Use of cases. S/U or letter grading.

231C. Corporate Valuation. (4) Lecture, three hours. Requisites: courses 408, 430, 403. Identifying and solving financial problems for all types of nonprofit organizations, with attention to funds accounting, budgeting and control, investment decision making and when market valuation cannot be used as criterion, and sources of funds for nonprofit organizations. Use of cases. S/U or letter grading.

231D. Bankers, Restructuring, and Corporate Governance. (4) Lecture, three hours. Requisites: courses 230 (or 430), 408. Process by which corporate control transactions take place; role of market for corporate control in leading to economic restructuring and shifts in resource allocation by corporations. Empirical evidence on economic and capital market reactions to control transactions and to defensive measures by management. Focus on interaction of strategic planning, firm value maximization, and investment decisions in life cycle of growth of firm. S/U or letter grading.

231E. Managing Finance and Financing Emerging Enterprises. (4) Lecture, three hours. Requisites: courses 230 (or 430), 403, 408. Designed for second-year graduate students. Emphasis on financial, control, and investment issues confronting rapidly growing companies. Focus on financial management and selection of financing vehicles that may be appropriate to securing organizations’ money requirements. S/U or letter grading.

231F. Identify Analyze and Manage Investment Management. (4) Lecture, three hours. Requisites: courses 230 (or 430), 408. Topics include security valuation, application of portfolio theory to investment decisions, performance evaluation, and basics of fixed-income portfolio management strategies. S/U or letter grading.


232D. Option Markets. (4) Lecture, three hours. Requisites: courses 230 (or 430), 408. Organization and role of organized derivative markets, including listed and OTC options and futures: arbitrage and hedging relationships, valuation of derivative trading strategies, and innovations in derivative markets. Students learn fundamental trading techniques by playing option trading game and writing term paper analyzing their strategies. S/U or letter grading.

232E. Market and Credit Risk Management. (4) Lecture, three hours. Requisites: courses 408, 430. Discussion of regulatory environment for both market and credit risk management, data necessary to manage these risks, types of models used for risk management, types of securities and techniques for hedging market and credit risk, performance measurement of risk management systems, and other types of risks that affect risk management, such as operational risk, liquidity risk, commodity risk, weather risk, and model risk. Letter grading.

232F. Behavioral Finance. (4) Lecture, three hours. Requisites: courses 408, 430. Introduction to and explanation of evidence of anomalous return behavior found in U.S. equities markets. Presentation of some paradigms and market anomalies that are rooted in studies from psychology and explanation of trading activity in equity risk-return paradigm. Introduction to some psychological research that suggests payoffs are inherent to investors. Employment of some results from psychology literature to explain irrationalities encountered in financial literature. Presentation of latest evidence on way in which investors trade stocks and individual and institutional investors form their portfolios. Letter grading.


234B. Financial Management of Multinational Corporations. (4) Lecture, three hours. Requisites: courses 230 (or 430), 408. Financial management of multinational firms from perspective of financial vice president or other financial officer within company. Topics include measuring foreign exchange risk, managing that risk with both contractual and operating strategies, foreign investment decisions, capital budgeting and cost of capital in international perspective, political and economic risk, and performance evaluation and control. S/U or letter grading.

235. Venture Capital and Private Equity. (4) Lecture, three hours. Requisites: courses 408, 430. Use of cases to study venture capital and venture capital. Analysis 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 select academic financial economics models to design contractual arrangements. Development of understanding for institutional context of private equity finance. Time also devoted to leveraged buyouts. S/U or letter grading.

236A-236B. Research Topics in Finance. (2-2) Lecture, three hours. Course 236A is enforced requisites include the following. Designed for Ph.D. students in their second through fourth year. Intended to help students bridge gap between coursework and research. Students select academic financial economics papers that they present, replicate, and critique. In Progress (236A) and S/U or letter (236B) grading.

237A. Fundamentals of Corporate Finance and Risk Management. (4) Lecture, three hours. Limited to Master of Financial Engineering Program students. Examination of broad range of issues faced by corporate financial managers, including analysis of investment and financing decisions of firms, impact on firms of agency costs and asymmetric information, mergers and acquisitions, private equity, and risk management strategies and tools. S/U or letter grading.


237G. Computational Methods in Finance. (4) Lecture, three hours. Limited to Master of Financial Engineering Program students. Quantitative computational tools used in finance, including numerical techniques such as implementation of binomial and trinomial option pricing, lattice algorithms for computing derivative prices and hedge ratios, simulation-based algorithms for pricing exotic 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. Asset pricing models in depth, portfolio optimization and construction of dynamic strategies, as well as pairs trading, long-term and short-term momentum trades, and strategies that address behavioral finance 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.


237J. Asset-Backed Security Markets. (4) Lecture, three hours. Limited to Master of Financial Engineering Program students. Exploration of uses and valuation of asset-backed securities, including mortgage-related securities and securities backed by credit cards, leases, and bank debt. Paperback to mortgage-related securities because of sheer size and importance of this market, as well as fact that pooling and tranching necessary for securitization can be most easily seen in mortgage collateral. Introduction to underwriting instruments and ways to derive other securities derived from these mortgages. Coverage of term structure and prepayment models necessary to value and hedge these securities. Investigation of credit risk in mortgages and other instruments. 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 implementing credit risk models for use in financial institutions and quantitative investors. Basics of corporate debt securities and in-depth introduction to credit derivatives markets. Discussion of structured credit products, such as collateralized debt obligations (CDOs). S/U or letter grading.

237L. Introduction to Derivatives. (2) Lecture, 90 minutes. Limited to Master of Financial Engineering Program students. Introduction to derivatives markets and basic concepts, models, analyses, and technical tools of quantitative finance used in these markets. Strong emphasis on applications using realistic examples and case studies. 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 one or two topics of current concern in financial engineering. May be repeated for credit. S/U or letter grading.

237N. Applied Finance Project. (8) Fieldwork, eight hours. Limited to Master of Financial Engineering Program students. Application of quantitative finance project that explores one quantitative finance problem that might be met in practice and involves development or use of some tools developed in M.F.E. Program. S/U or letter grading.


237P. Macroeconomic Essentials. (2) Lecture, three hours. Limited to Master of Financial Engineering Program students. Examination of basic macroeconomic theories, concepts, and applications, as well as global financial crisis, fiscal and external sustainability analysis, curreny, and long-term economic growth in global economy. How to access and organize Web-based global macroeconomic data. Letter grading.

237Q. Introduction to Econometrics. (2) Lecture, three hours. Limited to Master of Financial Engineering Program students. Theory and in-depth application of linear regression. Topics include simple linear regression, multiple linear regression, prediction, measurement of outliers, and diagnostics of stochastic assumptions. Letter grading.

238. Special Topics in Finance. (4) Lecture, three hours. Requires: 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 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 exchange developed as introduction to 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: training 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 topics in corporate finance theory and empirical research. May be repeated for credit with instructor change. S/U or letter grading.

239X-239Y. 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.


240F. Global Supply Chain Management. (4) Lecture, three hours. Requires: course 410. Business en-vironment today is characterized by globalized opera-tions, intense competition, rapid technological change, and short product life cycles. Consequently, firms that are longer affordable. In many industries competition has moved from firm lev-el to supply chain level. Provides understanding of strategic, tactical, and operational issues in supply chain management, with generous attention to emerging digital economy. S/U or letter grading.


241A. Technology Management. (4) Lecture, three hours. Requires: courses 410, 411. Management of high-technology firm, including acquisition, creation, and utilization of technology and knowledge assets. Research and product development, product and process technology, high-technology markets, competition, and technology strategies. Case examples from sectors such as comput-ers, telecommunications, medical devices, nanotechnology, advanced transportation systems, and electronics. S/U or letter grading.


242B. Models for Operations Systems Design. (4) Discussion, three hours. Requires: course 410C. Designed for Ph.D. students. Survey of research liter-ature 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.


243D. DY-243Z. Seminar, 90 minutes to three hours. Required of all Ph.D. students in decisions, operations, and technol-ogy management. Student, faculty, and guest speaker presentations of ongoing research. May be repeated for credit. S/U or letter grading.
244X-244Y-244Z. Research in Decisions, Operations, and Technology Management. (1-1-2) Lecture, required for first- and second-year Ph.D. students in decisions, operations, and technology management. Survey of research literature in operations and technology management. Seminar reports dealing with special topics. May be repeated for credit with S/U or letter grading.

245. Special Topics in Decisions, Operations, and Technology Management. (4) Lecture, three hours. Designed for M.B.A. and Ph.D. students. Studies of advanced topics 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 advanced optimization models, empirical research in operations management, 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. Business and Environment. (4) Lecture, three hours. Overview of many ways in which environmental issues interact with main functional areas of business: finance, marketing, strategy, operations, accounting. Basic introduction to background of environmental issues, with focus primarily on business aspects. Specific topics vary from year to year, but course covers key issues every manager should know about environmental issues in business. S/U or letter grading.

246C. Management in Public and Private Nonprofit Sectors. (4) Designed for graduate students. Examination of the management of the public and private nonprofit sectors of U.S. society; unique aspects and management 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 public 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) Descriptive study of criteria for decision making in artistic institutions, including role of the institution in society, economic environment of the arts, and artistic concepts, with emphasis on how every manager should know about environmental issues in business. S/U or letter grading.

248A. Strategic 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 companies involved in the entertainment industry. Cases and 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 markets (pay TV, videocassettes, syndication).

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 to public/not-for-profit problems. 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 M232.) Lecture, three hours. Designed for graduate students. Consideration, at advanced level, of collective bargaining process, labor/management agreement, administration of the contract, law of labor/management relations, union structure and goals, and influence of external labor markets on labor relations. S/U or letter grading.

250B. Human Resource Management; Process and Law. (4) Requisites: course M250A. Systematic exploration of the process and law concerning administrative and legal aspects of human resource management. Topics include processes of managing human resources and impact of governmental policies on employer/employee relations.

250C. Behavioral Foundations of Human Resource Management. (4) Requisite: course 250B. Topics include development and training; human resource accounting; behavioral foundations of participating management; motivation, productivity, and satisfaction; designing reward systems; and evaluation of organization effectiveness. Emphasis on understanding, predicting, and influencing human behavior in organizations.

250D. Thinking on Your Feet. (4) Lecture, 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 emergent 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, design for managers as well as workers. Organization at three related but distinct levels of analysis: (1) day-to-day utilization of people as organizational resources to achieve optimal productivity, satisfaction, relation, and development; (2) personnel management function or system that performs specialized human resource functions; and (3) issues facing top management which involve management of human resources, including strategic planning, design of reward systems, union/management relations, and design of corporate culture.

252. Systems of Employee/Management Participation. (4) Designed to provide 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 to demonstrate varieties of modern capitalism and business/government relations around the world. Analysis of major domestic policy options that nations are pursuing in response to economic globalisation and introduction to international coalitions being formed, especially NAFTA, and to nongovernmental organizations created to deal with special problems such as global environmental crisis. Letter grading.

254. Pay and Rewards in Organizations. (4) Lecture, three hours. Systematic treatment of pay (compensation) and rewards in organizations, with emphasis on design, implementation, and outcomes of organizational pay and reward systems and practices that are shaped by strategic, labor market, and motivational considerations. Specific topics include variable compensation (e.g., bonus, profit-sharing, stock ownership, and 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.

M255. Comparative Industrial Relations. (4) (Same as Public Policy CM231.) Lecture, three hours; outside study, nine hours. Requisite: course 409 or elementary knowledge of 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 these systems; 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 common problems of leadership. Students develop better understanding of how they can successfully address business situations that define their leadership and ethical positions. Letter grading.

257. Human Resource Management in Creative and Nonprofit Sectors. (4) Designed for graduate students. Analysis of human resource management theory and practices in industries where primary product is creative or intellectual (e.g., arts, entertainment, education, high technology, and journalism). Consideration of incorporation of work design, employee influences, systems, and business strategies in human resource management. Interpersonal and group processes for managing human behavior. S/U or letter grading.

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 resources and organizational behavior. Emphasis on recent contributions to theory, research, and methodology. Of special interest to advanced Ph.D. candidates in academic staff or human resource faculty. May be repeated for credit. S/U or letter grading.

M259A. Individuals and Groups in Organizations. (4) (Formerly numbered 259A.) (Same as Psychology M259A.) Lecture, three hours. Designed for graduate students. Doctoral-level survey of classic and emerging theories and research in field of organizational behavior, with focus on micro-level topics related to individual and interpersonal processes within organizations. Exploration of how individual behaviors, cognitions, and perceptions are affected by organizational context, structure, and culture. S/U or letter grading.

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, motivation, and technology/work systems. S/U or letter grading.

259C. Markets and Organizations. (4) Seminar, three hours. Designed for graduate students. Doctoral-level survey of major topics in organizational behavior, with focus on macro-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.


261B. Global Marketing Management. (4) Lecture, three hours. Requisite: course 411. Analysis of opportunities, distinctive characteristics, and emerging trends in foreign markets, including exploration of alternative methods and strategies for entering foreign markets; organizational planning and control; impact
of social, cultural, economic, and political differences; and problems of adapting American marketing concepts and strategies.


263A. Consumer Behavior. (4) Lecture, three hours. Requisite: course 411. Study of nature and determinants of consumer behavior. Emphasis on influence of sociopsychological factors such as personality, small groups, demographic variables, social class, and culture on formation of consumer attitudes, consumption, and purchasing behavior. S/U or letter grading.

264A. Market Research. (4) Lecture, three hours. Requisite: course 411. Designed for prospective users of research results rather than for specialists in research. Marketing research is aid to management decision making. Development of problem-analysis skills, providing knowledge of concepts and methods of marketing research, with increased sensitivity to limitations of marketing data. Letter grading.

264B. Data Analytics for Marketing and Finance. (4) Lecture, three hours. Enforced requisite: course 402. How to fit predictive models and visualize multivariate data and topics from marketing and finance. Topics include conditional prediction and predictive models, advanced treatment of regression, visualization and graphics, automating analysis for high dimensional data. Use of industry-leading R/R Studio statistical environment. S/U or letter grading.

265. Brand Management. (4) Lecture, three hours. Requisite: course 411. Introduction to considerations in development, implementation, and management of brands. Develops strategies to continue maintaining strong brands. Topics include building brand knowledge and identities, marketing mix and brands, brand architectures, and brand equity. Letter grading.

266A. New Product Development. (4) Lecture, three hours. Requisite: course 411. Examination of new product development (NPD) process with objective of learning key tools and methods and applying them to case study situations. Concepts and course project. Process viewed through three lenses: quantifiable rational attributes, appeal due to emotional characteristics, and cost/technical 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, cost reduction, and creativity. Letter grading.


267. One-to-One Marketing. (4) Lecture, three hours. Requisites: courses 402, 411. Use of notion of customer life cycle as organizing principle and application to one-to-one marketing context. Frameworks and analytical tools for interacting with customers and learning about their preferences as they evolve through four stages of each customer’s life cycle: (1) customer acquisition, (2) initial post-purchase purchasing, (3) mid-maturity purchase and transaction behavior, and (4) customer attrition or switchover to other product lines. S/U or letter grading.

268. Selected Topics in Marketing. (4) Lecture, three hours. Requisite: course 411. Study of selected areas of marketing knowledge and thought. Specific subjects vary each term depending on particular interests of instructor and students. Individual projects and reports. May be repeated for credit. S/U or letter grading.

269A. Theory in Marketing. (4) Serves as mechanism to introduce students to development of market- ing thought. Issues pertaining to general topic of theory development and testing. Prepares students for conducting theoretically grounded research in market- ing.

269B. Research in Marketing Management. (4) Discussion, three hours. Designed for Ph.D. students. Study of research issues associated with marketing management. Emphasis on planning, execution, measurement, use of strategic modeling, and impact of marketing research. S/U or letter grading.

269D. Behavioral Research in Marketing. (4) Seminar, three hours. Designed for Ph.D. students who are considering careers in both marketing and related fields. Empirical research in consumer behavior surveyed and critically evaluated from both theoretical and practical perspectives. S/U or letter grading.

269E. Special Research Topics in Marketing. (4) Designed for Ph.D. students. Advanced selected topics in marketing, with emphasis on thorough examination of one or two topics in current research and theory. May be repeated for credit.

269X-269Y. Workshops: Marketing. (1-1-2) Discussion, three hours. Designed for Ph.D. students. Required of all students during first two years of their Ph.D. work. Series consists of number of leading scholars in marketing and related disciplines who make presentations to marketing faculty and Ph.D. students. Active participation and intellectual interchange that helps students gain richer perspective on field of marketing. In Progress (269X, 269Y) and S/U or letter (269Z) grading.


270C. Web Business. (4) Lecture, three hours. Doing business on Web. Web infrastructure and economy; Web business models and strategies. Web business development, new frontiers, and new frontiers, such as Web services, social networking, and semantic Web. S/U or letter grading.


271B. Advanced Information Technology Infrastructure. (4) Lecture, three hours. Enforced requisites: course 271A, or concepts of computer systems and architectures (hardware, software, networks, and data) to serve or organizational needs in rapidly changing competitive and technological environment. Enterprise application integration. S/U or letter grading.

271C. Emergent Technologies. (4) Lecture, three hours. Special topics in new and emergent technologies such as mobile computing, cloud computing, and visualization. Assessment of industrial opportuni- ties and market impacts. Topics vary. May be repeated for credit. S/U or letter grading.


274A. Special Topics in Information Systems. (4) Seminar, three hours. Designed primarily for Ph.D. students. Examination in depth of problems or issues of potential concern in information systems theory and practice. Topics vary. May be repeated for credit. S/U or letter grading.


M277. Real Estate Finance Law. (1 to 8) (Same as Law M209.) Lecture, three hours. Concentrated study of law governing financing of land transactions from both real estate and investment perspectives. Topics include California deed of trust, installment land contracts and other mortgage substitutes, assignments of rents, receivership, prepayment, foreclosure, priority, California antideficency legislation, impact of borrower bankruptcy on mortgage lenders, construction lending, future advances lending, and secondary market. S/U or letter grading.

M277A-M277B. Real Estate Finance Law. (1 to 8 each) (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 real estate and investment perspectives. Topics include California deed of trust, installment land contracts and other mortgage substitutes, assignments of rents, receivership, prepayment, foreclosure, priorities, California antideficency legislation, impact of borrower bankruptcy on mortgage lenders, construction lending, future advances lending, and secondary market. In Progress (M277A) and S/U or letter (M277B) grading.

278A. Urban Real Estate Financing and Investing. (4) Lecture, three hours. Enforced requisites: courses 408, 430. Investor-oriented course in which real estate and business trends are evaluated to determine alternative real estate investment opportunities. Use of current financial, economic, and investment theories and
295B. Small Business Management. (4) Exploration of crucial aspects in managing small business enterprises. Emphasis on identification and analysis of characteristic operating problems of small firms and application of appropriate methods or techniques for their solution.

295C. Corporate Entrepreneurship. (4) Inquiry into nature of entrepreneurial activity and examination of entrepreneurial strategies in large industrial enterprises. Emphasis primarily on managerial effects aimed at identification, development, and exploitation of commercial organizational innovations, management of new product or process developments, and effective new venture management in a corporate context.

295D. Business Plan Development. (4) Lecture, three hours. Designed for graduate courses 295A. Fundamentals of developing effective written business plans. Basic principles of developing plans for sales, marketing, product or service, operations, financials, and management and staffing functions of new start-up businesses. S/U or letter grading.

296A. International Business Management. (4) Discussion, three hours. Identification, analysis, and resolution of managerial issues of policy and action within context of international corporation, with emphasis on problems of adaptation to different sociocultural, national, political, economic, and environmental characteristics on planning, structuring of organizational units, and coordination and control in multinational firms. S/U or letter grading.

296B. International Comparative Management Research. (4) Designed for Ph.D. students. In-depth study of theory and research pertaining to international business and comparative management. Emphasis on recent research developments and methodological issues. Imparts knowledge on design and conduct of international management research.

297A. Comparative and International Management. (4) Comparative study of practice of management in selected foreign countries, as affected by their social environments and development of management theory. S/U or letter grading.


297C. International Business Law. (4) Requisites: courses 205A, 296A. Legal environments in which international business operates; overseas business relationships and organizations; arbitration, taxation, transfer of capital, and technology regulations; property, trademark, and copyright safeguards; arbitration of international business disputes; expropriation of foreign investments; international business and government relations.

297D. International Business Negotiations. (4) Requisite: course 296A. Exploration of international business negotiations of multinational enterprises with governmental agencies and foreign-based firms on a wide range of issues as the establishment, solution of joint ventures, extent of foreign ownership/management control, terms/conditions for technology transfer, investment incentives.

297E. Business and Economics in Emerging Markets, (4) Lecture, three hours. Requisite: course 205A or 405. Analysis of changing economic, political, demographic, and sociocultural conditions in developing countries as they affect the business environment. Process of diffusion and adaptation of market-oriented forms, and creation of domestic capital markets. Inflation and stabilization programs, identification of business risks and opportunities, as well as tools needed to manage firms under these conditions. S/U or letter grading.

298A. Special Topics in Management Theory. (4) Designed for Ph.D. students. Examination in depth of problems of concern in management theory. 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.

298B. Special Topics in International and Comparative Management. (4) Designed for Ph.D. students. Examination in depth of problems or issues of current concern in international and comparative management. 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.

298C. Special Topics in Sociotechnical Systems. (4) Designed for Ph.D. students. Examination in depth of problems or issues of current concern in sociotechnical systems. 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.

298D. Special Topics in Management. (1 to 4) Lecture, three hours. Designed for graduate students. In-depth examination of problems or issues of current concern in management, with numerous topics offered each year. May be repeated for credit. S/U or letter grading.

299M. Theory and Research Methods in Organizations. (4) Seminar, three hours. Designed for Ph.D. students. Emphasis on developing research capacity of Ph.D. candidates, academic staff, or distinguished visiting faculty. May be repeated for credit. S/U grading.


299R. Research Methods in Management. (4) Seminar, three hours. Designed for Ph.D. students. Emphasis on feedback and evaluation of papers prepared for research requirement. Quarterly meetings to discuss expectations of research committee and Doctoral Student Subcommittee. Students enroll in 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 person nel 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. Mathematics for Management. (4) Lecture, three hours. Limited to graduate students. General mathematics review for M.B.A. students. Fundamentals, including topics from algebra, differential calculus in single and multiple variables, logarithmic and exponential functions, probability, and statistics; applications, including economic theory, finance, time value of money, inventory management, linear programming, and mathematical models. S/U grading.

401A–401B. Managerial Problem Solving. (3-3) Discussion, three hours. Use of international business simulation to reinforce logical problem solving techniques. Emphasis on understanding how business decisions are made and the effective use of analytical and critical thinking skills. Potential topics include strategy formulation, marketing, finance, and human resource management. S/U grading.

402. Data and Decisions. (4) Lecture, three hours. Topics include probability, random variables (expectation, variance, covariance, normal random variables), decision trees, estimation, hypothesis testing, and multiple regression models. Emphasis on actual business problems and data. Letter grading.

403. Financial Accounting. (4) Lecture, three hours. Designed for graduate students. Introduction to the fundamental financial accounting methods and procedures, with emphasis on financial statements. Provides basis for firm understanding of ‘language of business’ and financial statements. Letter grading.

404. Information Systems. (4) Lecture, three hours. Overview of information systems from perspective of general manager. 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.


407. Business Analytics with Spreadsheets. (4) Lecture, three hours. Requisite: course 402. Introduction to use of analytical methods for making strategic and operational decisions, including forecasting, financial planning, risk analysis, and simulation. Topics include time value of money, discounting and present values, valuation of bonds and stocks, risk and return, 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 nonmanufacturing activities for both intermittent and continuous systems. Production organizations, analytical models and methods, facilities design, and design of control systems for production operations. Letter grading.


412. Graduate Research in Management. (4) Lecture, three hours. Preparation: completion of first-year core program. Integrative approach to theory and practice of management in complex organizations, emphasizing individual and organizational processes, structures, creating/maintaining planning, control, information, incentive systems, different patterns of human interaction such structures and systems tend to produce.
413A. Managerial Computing. (4) Lecture, three hours. Individual computing in support of strategic analysis, decision making, and management communication. Use of personal 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. Communication Development for Leaders I, II. (2–2) Lecture, three hours. Course 421A is enforced requisite to 421B. Key attributes, knowledge, skills, and strategies necessary to succeed communicatively in workplace. Examination of business communication in oral and written modes, interpersonal, and group communication skills. Emphasis on hands-on exercises. S/U or letter grading.

422. Analysis and Communications. (4) Discussion, three hours. Designed for graduate students. Study of oral and written management communications, including audience analysis, persuasion, revising and editing, presentation of technical information, and use of computer technology. Organization of oral and written exercises. Emphasis on personal attention to students’ written communications and oral presentations.

427. Global Access Program. (8) Fieldwork, 60 hours. Requisites: courses 402, 403, 405, 408, 409, 410, 411, 414A, 420. Limited to Fully Employed M.B.A. Program students. Must be taken in Summer and Fall Quarters of third year. Faculty-guided consulting project with international company or U.S. company with international project focus. Establishment of client relationships, identification of problems or strategic questions, design of study, collection and analysis of secondary and primary research data, development of comprehensive business plan, and preparation of oral and written reports. S/U or letter grading.


440. International Preorientation. (1) Lecture, six hours. Limited to international students in M.B.A. program. Intensive communication workshop that meets six times (Saturdays included) per week for three weeks. Basic listening, speaking, writing, and working/leading teams for case analysis, cold call participation, and job search. Introduction to research and career resources. May not be applied toward M.B.A. degree. Offered in summer only; S/U grading.

444A. Introduction to Applied Management Research. (2) Lecture, two hours. Limited to full-time M.B.A. program students. Must be taken after completion of first year in program. Methods of organizational and strategic analysis to determine relationship of organizations to their environments; establishment of client relationships, identification of problems or strategic questions, design of study, collection and analysis of secondary and primary research data, development of comprehensive business plan, and preparation of oral and written reports. S/U or letter grading.

444B–444C. Applied Management Research: Two-Quarter Plan. (4–4) (Formerly numbered 444–444B.) Fieldwork, four hours. Limited to full-time M.B.A. program students. Must be taken after completion of first year in program. Projects include: (1) faculty-guided consulting project with private companies, nonprofit organizations, or government agencies; establishment of client relationships, identification of problems or strategic questions, design of study, collection and analysis of secondary and primary research data, development of comprehensive business plan, and preparation of oral and written reports. (2) faculty-guided implementation of one new business or (3) pursuit of one faculty-led special research project worthy of publication in recognized academic research journal. In Progress (444B) and S/U or letter (444C) grading.

445. Applied Management Research. (8) Fieldwork, eight hours. Must be taken in second year (or its equivalent for part-time students). Supervised study of an organization, including establishment of client consultant relationships, identification of problems or strategic questions, design of study, collection and analysis of data, development and reporting of 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 international, group, intergroup, total organization, and interorganizational settings. S/U or letter grading.

452. Fieldwork in Technical Assistance for Minority Business Enterprises. (4) Fieldwork, semester to one academic year. Preparation of first year of master’s program. Supervised field experience in business consulting and other forms of technical assistance for business firms and management in ethnic communities; seminars and other shared learning experiences in setting business administration technology to the urban ghetto.

453. Fieldwork in Arts Management. (4 to 12) Supervised 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 at least two terms of M.B.A. program. Required of all full-time M.B.A. students. Under direction of M.B.A. program associate dean or other supervising faculty advisor, students perform supervised practical experience or fieldwork in organization as intern or fellow. Supervised fieldwork includes preparation of evaluations or consulting report correlated to defined program of study. S/U grading.

455E. International Exchange Program. (2 to 16) Lecture, six hours. Open to Executive M.B.A. Program students. Preparation: completion of at least one year in program. Projects include: (1) faculty-guided visits to local cultural and historical sites. 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. Alternatives and courses presented for augmenting diagnostic and decision-making skills of individuals. Use of readings, cases, decision simulations, and discussions to explore areas of charting job and career progress, working with others, and planning work cutting.

461B. Leadership Foundations II. (1) Lecture, one hour. Limited to Executive M.B.A. Program students. Continuation of course 461A, with focus on development of self-assessment and self-reflection skills. Facilitation of self-evaluation of leadership strengths and weaknesses, with emphasis on individual problem solving and decision making and team design and development. Readings, case discussions, peer coaching, and discussions. In Progress grading (credit to be given only on completion of course 461C).

461C. Leadership Foundations III. (1) Lecture, one hour. Limited to Executive M.B.A. Program students. Continuation of course 461B. Further exploration of leadership strengths and weaknesses, with emphasis on individual peer coaching, conflict management, interpersonal skills, and leadership development. Readings, case discussions, peer coaching, and discussions. S/U grading.

461D. Leadership Foundations IV. (1) Lecture, one hour. Limited to Executive M.B.A. Program students. Continuation of course 461C. Further exploration of leadership strengths and weaknesses, with emphasis on career development, social networks, and organizational decision making. Readings, case discussions, peer coaching, and discussions. S/U grading.

463D. Data Analysis and Management Decisions I. (4) Lecture, four hours. Limited to Executive M.B.A. Program students. Presentation of findings and recommendations or strategic questions, design of study, collection and analysis of secondary and primary research data, development of comprehensive business plan, and preparation of oral and written reports. S/U or letter grading.

489E. International Exchange. (2 to 4) Lecture, three hours; discussion and site visits, 20 hours. Preparation of predeparture courses in Fully Employed M.B.A. Program. Taught in English. Intensive one-week program in one foreign country. Courses taught by faculty members from partner institutions in one country. Topics vary but are tailored to M.B.A. curriculum. Exposure to local business practices, visiting companies, and exploration of local cultural and historical sites. S/U or letter grading.

480A–480B. Managing Finance and Financing Executive Model Book. (16) Hours. Limited to Executive M.B.A. Program students. Course 480A is enforced requisite to 480B. Designed for second-year graduate students. Emphasis on financial, control, and investment issues confronting rapidly growing companies in entrepreneurial settings. Consideration and selection of financing vehicles that may be appropriate to securing money requirements of organizations. In Progress (480A) and letter (480B) grading.

481A. Leadership Foundations I. (2) Lecture, two hours. Limited to Executive M.B.A. Program students. Continuation of course 481A, with focus on development of self-assessment and self-reflection skills. Facilitation of self-evaluation of leadership strengths and weaknesses, with emphasis on individual problem solving and decision making and team design and development. Readings, case discussions, peer coaching, and discussions. In Progress grading (credit to be given only on completion of course 481E).

481B. Leadership Foundations II. (1) Lecture, one hour. Limited to Executive M.B.A. Program students. Continuation of course 481B. Further exploration of leadership strengths and weaknesses, with emphasis on individual peer coaching, conflict management, interpersonal skills, and leadership development. Readings, case discussions, peer coaching, and discussions. S/U grading.

481D. Leadership Foundations IV. (1) Lecture, one hour. Limited to Executive M.B.A. Program students. Continuation of course 481C. Further exploration of leadership strengths and weaknesses, with emphasis on career development, social networks, and organizational decision making. Readings, case discussions, peer coaching, and discussions. S/U grading.


464. Management. (4) Limited to Executive M.B.A. Program students. Familiarizes the manager with functions of accounting by focusing on use of external data, recognizing the importance of added value of managers, anticipating what reactions to one’s own actions. S/U or letter grading.

465A. Quantitative Methods for Managers. (2) Lecture, two hours. Limited to Executive M.B.A. Program students. Survey of modeling approaches to managerial planning and decisions. Emphasis on ability to recognize situations where models can be used advantageously, to work effectively with model building specialists, and to use 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 framework for thinking strategically about business decisions. Examination of interactions between firms and parties external to it through lens of game theory. Framework based on ideas underlying game theory, such as recognizing interdependencies among players, getting away from win-lose mindset, importance of added value of players, anticipating others’ reactions to one’s own actions. S/U or letter grading.

466A. Financial Policy for Managers. (4) Lecture, four hours. Limited to Executive M.B.A. Program students. Modern financial management deals with decision making under uncertainty for corporate financial management, portfolio investment decisions, financial institutions, and international financial management. Focus on learning sound theoretical tools and applying them in casework. S/U or letter grading.

466B. Advanced Financial Policy for Managers. (4) Lecture, four hours. Limited to Executive M.B.A. Program students. Traditional financial management concepts, with decision making under uncertainty for corporate financial management, portfolio investment decisions, financial institutions, and international financial management. Focus on learning sound theoretical tools and applying them in casework. S/U or letter grading.


469A-469B. Management of Human Resources. (2-4) (Formerly numbered 469.) Lecture, three hours. Course 469A is enforced requisite to 469B. Limited to Executive M.B.A. Program students. Introduction to major areas of management—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. In Progress (469A) and letter (469B) grading.

470A. Introduction to Strategic Management Research. (2) Fieldwork, two hours. Limited to Executive M.B.A. Program students. Methodological and organizational and strategic analysis to determine relationship of organization with its environment. In Progress grading (credit to be given only on completion of courses 470B and 470C).

470B. Strategic Management Research. (4) Fieldwork, four hours. Limited to Executive M.B.A. Program students. Preparation of strategic overview of selected companies, collection and analysis of primary and secondary data, including (but not limited to) interviews of corporate executives, corporate financial and marketing data, industry reports, and customer and competitor interviews and/or surveys. In Progress grading (credit to be given only on completion of course 470C).

470C. Strategic Management Research. (4) Fieldwork, four hours. Limited to Executive M.B.A. Program students. Preparation of course-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. (2-3) 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 (471B) grading.

472A. Marketing Strategy and Policy. (4) Lecture, four hours. Limited to Executive M.B.A. Program students. Analysis of concepts used in 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. Macroeconomic issues, including intergroup relations, design and functioning of organizations, and relationships of organizations to their environment. S/U or letter grading.


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, they are broad environmental factors and trends that affect most, if not all, business institutions, including some forces influencing 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, 90 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.

479E. International Exchange: Executive M.B.A. Program. (3 to 4) Lecture, three hours; discussion and/or seminar, two hours. Preparation: completion of first-year core courses in Executive M.B.A. Program. Intensive one-week program in one foreign country, with courses taught by faculty members from partner institutions in destination country. Topics vary but are tailored to M.B.A. curriculum and are limited to finance, marketing, global economics, strategy, human resources, operations, and technology management. Exposure to local business practices, company site visits, and exploration of local cultural and historical sites. Letter grading.

480. Corporate Governance. (4) Lecture, three hours. Foundations for members of corporate boards of directors to understand their roles and 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.


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 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 business planning in Asia-Pacific region/countries. Letter grading.

485. Corporate Entrepreneurship. (4) Lecture, three hours. Managerial efforts aimed at identification, development, and exploitation of technical and organizational innovations, management of product or process developments, 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 organization 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 themselves as leaders. Letter grading.

487A-487B. Entrepreneurship and Venture Initiation. (2-3) Lecture, 90 minutes. Course 487A is enforced requisite to 487B. Limited to Executive M.B.A. Program students. Introduction to basic tools and jargon for entrepreneurship that requires financing the management of a venture. Terminology used by lawyers, accountants, venture capitalists, and other investors when forming and financing
ing new companies. Assessment of feasibility of business concept and communication of concept to potential investors, employees, and business partners. In Progress (487A) and letter (487B) grading.

488. Business Plan Development. (4) Lecture, three hours; discussion, one hour. Enforced requisites: courses 487A, 487B. Limited to Executive M.B.A. Program students. How to develop business plans, understanding of analytical processes required to produce plans, improvement of student writing and oral presentation skills, and review of business plans of other entities. Writing of one complete business plan and presentation of it to experienced investors. Letter grading.

501. Cooperative Program. (2 to 8) Preparation: consent of UCLA AGSM graduate adviser and assistant dean, and host campus instructor, department chair, and graduate dean. Used to record enrollment of UCLA students in courses taken under cooperative arrangements with USC. S/U grading.

596. Research in Management. (1 to 8) Directed individual study or research. May be repeated. S/U or letter grading.

597. Preparation for Qualifying Examinations. (4 or 12) Preparation for master’s comprehensive examination or Ph.D. qualifying examinations. S/U grading.


**Materials Science and Engineering**

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Scope and Objectives

At the heart of materials science is an understanding of the microstructure of solids. “Microstructure” is used broadly in reference to solids viewed at the subatomic (atomic) and electronic levels, and the nature of the defects at these levels. The microstructure of solids at various levels profoundly influences the mechanical, electronic, chemical, and biological properties of solids. The phenomenological and mechanistic relationships between microstructure and the macroscopic properties of solids are, in essence, what materials science is all about.

Materials engineering builds on the foundation of materials science and is concerned with the design, fabrication, and optimal selection of engineering materials that must simultaneously fulfill dimensional, property, quality control, and economic requirements.

The department also has a program in electronic materials that provides a broad-based background in materials science, with opportunity to specialize in the study of those materials used for electronic and optoelectronic applications. The program incorporates several courses in electrical engineering in addition to those in the materials science curriculum.

The undergraduate program leads to the Bachelor of Science degree in Materials Engineering. Students are introduced to the basic principles of metallurgy and ceramic and polymer science as part of the department’s Materials Engineering major. A joint major field, Chemistry/Materials Science, is offered to students enrolled in the Department of Chemistry and Biochemistry (College of Letters and Science).

The graduate program allows for specialization in one of the following fields: ceramics and ceramic processing, electronic and optical materials, and structural materials.

**Undergraduate Study**

The materials engineering program is accredited by the Engineering Accreditation Commission of ABET. See http://www.abet.org.

The Materials Engineering major is a designated capstone major. Students undertake two individual projects involving materials selection, treatment, and serviceability. Successful completion requires working knowledge of physical properties of materials, and strategies and methodologies of using materials properties in the materials selection process. Students learn and work independently and practice leadership and teamwork in and across disciplines. They are also expected to communicate effectively in oral, graphic, and written forms.

**Materials Engineering B.S. Capstone Major**

The materials engineering program is designed for students who wish to pursue a professional career in the materials field and desire a broad understanding of the relationship between microstructure and properties of materials. Metals, ceramics, and polymers, as well as the design, fabrication, and testing of metallic and other materials such as oxides, glasses, and fiber-reinforced composites, are included in the course contents.

**Materials Engineering Option**

Preparation for the Major

Required: Chemistry and Biochemistry 20A, 20B, 20L; 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.

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 C114, Civil and Environmental Engineering 130, 135A, Electrical Engineering 2, 123A, 123B, Materials Science and Engineering C111, 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.
Electronic Materials 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); Electrical Engineering 10; Materials Science and Engineering 10, 90L; Mathematics 31A, 31B, 32A, 32B, 33A, 33B; Physics 1A, 1B, 1C.

The Major
Required: Chemical Engineering 102A (or Mechanical and Aerospace Engineering 105A), Electrical Engineering 101A, 121B, Materials Science and Engineering 104, 110, 110L, 120 (or Electrical Engineering 2), 121, 121L, 122, 130, 131, 131L, Mechanical and Aerospace Engineering 101, and 181A or 182A; four courses (16 units) from Electrical Engineering 123A, 123B, Materials Science and Engineering 132, 150, 156; 4 laboratory units from Electrical Engineering 170L. Materials Science and Engineering 141L, 161L, 199; three technical breadth courses (12 units) selected from an approved list available in the Office of Academic and Student Affairs; one capstone design course (Materials Science and Engineering 140); and one major field elective course (4 units) from Electrical Engineering 110, 131A, Materials Science and Engineering C111, 143A, 162.

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://grad.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 Materials Science and Engineering offers Master of Science (M.S.) and Doctor of Philosophy (Ph.D.) degrees in Materials Science and Engineering.

Materials Science and Engineering
Lower Division Courses
10. Freshman Seminar: New Materials. (1) Seminar, one hour; outside study, two hours. Preparation: high school chemistry and physics. Not open to students with credit for course 104. Introduction to basic concepts of materials science and new materials vital to advanced technology. Microstructural analysis and various material properties discussed in conjunction with such applications as biomedical sensors, pollution control, and microelectronics. Letter grading.

90L. Physical Measurement in Materials Engineering. (2) Laboratory, four hours; outside study, two hours. Various measurement methods utilized in materials science and engineering. Mechanical, thermal, electrical, magnetic, and optical techniques. Letter grading.

Upper Division Courses
104. Science of Engineering Materials. (4) Lecture, three hours; discussion, one hour; outside study, eight hours. Requisites: Chemistry 20A, 20B, 20L, Physics 1A, 1B, 1C. Introduction to different kinds of materials used in engineering designs: metals, ceramics, elastomers, glasses, 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.

105. Principles of Nanoscience and Nanotechnology. (4) (Same as Engineering M101.) Lecture, four hours; discussion, one hour; outside study, seven hours. Requisite: course 104. Modern methods of materials characterization; preparation and characterization of nanometer-scale materials. Letter grading.

110L. 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, Laue method; determination of crystal structures; phase diagram determination; high-resolution X-ray diffraction methods; X-ray spectroscopy; design of materials characterization procedures. Letter grading.

110L. Introduction to Materials Characterization B (Electron Microscopy). (4) (Formerly numbered 111.) Lecture, three hours; laboratory, two hours; outside study, seven hours. Characterization of microstructure and nanochemistry of materials; transmission electron microscopy; reciprocal lattice, electron diffraction, stereographic projection, direct observation of defects in crystals, replicas; scanning electron microscopy; emissive and reflective modes; chemical analysis; electron optics of both instruments. Concurrently scheduled with course C211. Letter grading.

C111. Introduction to Materials Characterization B (Electron Microscopy). (4) (Formerly numbered 111.) Lecture, three hours; laboratory, two hours; outside study, seven hours. Characterization of microstructure and nanochemistry of materials; transmission electron microscopy; reciprocal lattice, electron diffraction, stereographic projection, direct observation of defects in crystals, replicas; scanning electron microscopy; emissive and reflective modes; chemical analysis; electron optics of both instruments. Concurrently scheduled with course C211. Letter grading.


120. Physics of Materials. (4) (Formerly numbered 120A) Lecture, four hours; discussion, one hour; outside study, seven hours. Requisites: courses 104, 110 (or Chemistry 113A). Introduction to electrical, optical, and magnetic properties of solids. Free electron model, introduction to band theory and Schrödinger wave equation. Crystal bonding and lattice vibrations. Mechanisms and characterization of electrical conductivity, optical absorption, magnetic behavior, dielectric properties, and optical properties. Letter grading.


121L. Materials Science of Semiconductors Laboratory. (2) Lecture, 30 minutes; discussion, 30 minutes; laboratory, two hours; outside study, three hours. Corequisite: course 121. Experiments conducted on materials characterization, including measurements of contact resistance, dielectric constant, and thin film x-ray 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 102A or Mechanical and Aerospace Engineering 105A. Summary of thermodynamic laws, equilibrium criteria, solution thermodynamics, mass-action law, binary and ternary phase diagrams, glass transitions. Letter grading.

131. Diffusion and Diffusion-Controlled Reactions. (4) Lecture, four hours; outside study, eight hours. Requisites: course 130. Diffusion in solids, nucleation and growth theory; precipitation from solid solution, eutectoid decomposition, design of heat treatment processes of alloys, growth of intermediate phases, gas-solid reactions, design of oxidation-resistant alloys, recrystallization, and grain growth. Letter grading.

131L. Diffusion and Diffusion-Controlled Reactions Laboratory. (2) Laboratory, two hours; outside study, seven hours. Concurrently scheduled with course CM233. Letter grading.


133. Ancient and Historic Metals: Technology, Microstructure, and Corrosion. (4) (Formerly numbered 133) Lecture, two hours; laboratory, 90 minutes. Processes of extraction, alloying, surface patination, metallic coatings, corrosion, and microstructure of ancient and historic metals. Extensive laboratory work in preparation and examination of metallic samples under microscope, as well as lectures on technology of metallic works of art. Practical instruction in metallographic microscopy. Exploration of phase and stability diagrams of common alloying systems and environments and analytical techniques appropriate for examination and characterization of microstructure. Concurrently scheduled with course CM233. Letter grading.

CM133. Ancient and Historic Metals: Technology, Microstructure, and Corrosion. (4) Lecture, two hours; laboratory, 90 minutes. Processes of extraction, alloying, surface patination, metallic coatings, corrosion, and microstructure of ancient and historic metals. Extensive laboratory work in preparation and examination of metallic samples under microscope, as well as lectures on technology of metallic works of art. Practical instruction in metallographic microscopy. Exploration of phase and stability diagrams of common alloying systems and environments and analytical techniques appropriate for examination and characterization of microstructure. Concurrently scheduled with course CM233. Letter grading.

140. Materials Selection and Engineering Design. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Requisite: at least two courses from 132, 150, 160. Explicit guidance among myriad materials available for design in engineering. Properties and applications of steels, nonferrous alloys, polymeric, ceramic, and composite materials, cost-
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C111. Introduction to Materials Characterization B (Electron Microscopy). (4) (Formerly numbered 211.) Lecture, three hours; laboratory, two hours; outside study, seven hours. Requisites: courses 104, 110. Characterization of microstructure and microchemistry of materials; transmission electron microscopy; reciprocal lattice, electron diffraction, stereographic projection, direct observation of defects in crystals, replicas; scanning electron microscopy; emissive and reflective modes; chemical analysis; electron optics of both instruments. Concurrently scheduled with course C111. Letter grading.


M215. Techniques and Materials of Archaeological and Cultural Materials: In Situ and Ex Situ Architectural Decorative Surfaces. (4) (Same as Art History M237 and Conservation C215.) Lecture, two hours; laboratory, three hours. Requisite: course M216 or C112 or Conservation M210. Recommended: Conservation M215. Designed for graduate conservation and art history students. Principles of archaeological conservation of in situ and ex situ monumental architectural and cultural materials, with focus on rock art, wall paintings, polychrome sculpture, decorative architecture and cultural localisation. Lectures, seminars, and case-study presentations, museum and site visits, hands-on laboratory experiences, and independent research that incorporates literary survey of archaeological and conservation records, scientific data, and ancient treatments. Letter grading.

C216. Science of Conservation Materials and Methods I. (4) (Same as Conservation M216.) Seminar, one hour; laboratory, three hours. Recommended requisite: course 104. Introduction to physical, chemical, and mechanical properties of conservation materials (employed for preservation and cultural materials) and their aging characteristics. Science and application methods of traditional organic and inorganic systems and introduction of novel technology based on biotechnology and nanomaterials. Letter grading.


222. Growth and Processing of Electronic Materials. (4) Lecture, four hours; outside study, eight hours. Requisites: courses 120, 130, 131. Thermodynamics and kinetics that affect semiconductor growth and device processing. Particular emphasis on fundamentals of growth (bulk and epitaxial), heteroepitaxy, implantation, oxidation. Letter grading.

223. Materials Science of Thin Films. (4) Lecture, four hours; outside study, eight hours; two outside study hours. Requisites: courses 120, 131. Fabrication, structure, and property correlations of thin films used in microelectronics for data and information processing. Topics include film deposition, interfacial properties, stress and strain, electromigration, phase changes and kinetics, reliability. 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. Basic vacuum technology and gas kinetics. Deposition methods used in high-tech- nology applications. Theory and experimental details of physical and chemical vapor deposition (PVD), chemical vapor deposition (CVD), plasma-enhanced chemical vapor deposition processes. Letter grading.

225. Materials Science of Surfaces. (4) Lecture, four hours; discussion, one hour; outside study, eight hours. Recommended preparation: Electrical Engineering 221B. Requisites: courses 151A and 222. Selected topics in materials science from modern Si-CMOS technology, including technological challenges in high k/metal gate stacks, strained Si FETs, SOI and three-dimen- sional FETs. Advanced and emerging techniques including transient-enhanced diffusion, nonvolatile memory, and metallization for ohmic contacts. 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 151A and 222. Selected topics in materials science from modern Si-CMOS technology, including technological challenges in high k/metal gate stacks, strained Si FETs, SOI and three-dimensional FETs. Advanced and emerging techniques including transient-enhanced diffusion, nonvolatile memory, and metallization for ohmic contacts. Letter grading.

CM233. Ancient and Historic Metals: Technology, Microstructure, and Corrosion. (4) (Same as Con- servation 2546.) Lecture, two hours; laboratory, 90 minutes. Designed for graduate conservation and ma- terials science students. Processes of extraction, al- loying, surface finish, corrosion, and dislocations in the context of ancient and historic meta- lls. Extensive laboratory work in preparation and examination of metallic samples under microscope, as well as lectures on technology of metallic works of art. Practical instruction in metallographic micros- copy. Exploration of phase and stability diagrams of common alloying systems and environments and an- alytical techniques appropriate for examination and characterization of metallic artifacts. Concurrently scheduled with course C133. Letter grading.

243A. Fracture of Structural Materials. (4) Lecture, four hours; laboratory, two hours; outside study, four hours. Recommended preparation: Engineering and sci- entific aspects of crack nucleation, slow crack growth, and unstable fracture. Fracture mechanics, dislocation models, fatigue, fracture in reactive envi- ronments, alloy development, fracture-safe design. Letter grading.


246F. Materials and Physics of Solar Cells. (4) Lecture, four hours. Comprehensive introduction to mate- rials and physical electronics of solar cells, covering basic physics of semiconductors in photovoltaic devices, physical models of cell operation, characteristics and design of common types of solar cells, and approach- es to increasing solar cell efficiency. Recent progress in solar cells, such as thin-film solar cells, tandem solar cells, and multiple junction solar cells provided to in- crease student knowledge. Tour of research laborato- ries included. Letter grading.


251. Chemistry of Soft Materials. (4) Lecture, four hours, outside study, eight hours. Intro- duction to organic chemistry and polymer chem- istry. Topics include basic statistical me- chanics, classical molecular dynamics, and Monte Carlo methods, with emphasis on understanding basic physical ideas and learning to design, run, and an- alyze computer simulations of materials. Use of ex- amples from current literature to show how these methods can be used to study interesting phenomena in materials science. Hands-on computer experi- ments. Letter grading.

270. Computer Simulations of Materials. (4) Lecture, four hours; outside study, eight hours. Intro- duction to modern methods of computational modeling in materials science. Topics include basic statistical me- chanics, classical molecular dynamics, and Monte Carlo methods, with emphasis on understanding basic physical ideas and learning to design, run, and an- alyze computer simulations of materials. Use of ex- amples from current literature to show how these methods can be used to study interesting phenomena in materials science. Hands-on computer experi- ments. 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 the basic principles that distinguish nanomaterials (with feature size below 100 nm) from more common microstructured materials. Exploration of new phenomena that emerge only in very small systems, using simple concepts from quantum me- chanics and thermodynamics. Topics include struc- ture and electronic properties of quantum dots, wires, nanotubes, and multilayers; self-assembly on surfac- es 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 Bioengineering CM278.) Lecture, three hours; discus- sion, two hours; outside study, seven hours. Requi- sites: course 104, or Chemistry 20A, 20B, and 20L. Exploration of 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, pro- cessing 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; dis- cussion, one hour; outside study, four hours. Re- searchers from leading research institutions around the world deliver lectures on advanced research topics in materials science and engineering. Students present summary previews of topics prior to lecture. Class discussions follow each presentation. May be repeated for credit. S/U grading.

296. Seminar: Advanced Topics in Materials Sci- ence and Engineering. (2) Seminar, two hours; out- side study, four hours. Advanced study and analysis of current topics in materials science and engineering. Discussion of current research and literature in re- search 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 appropriate, field trips may be arranged. May be repeated with topic change. 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.

586. 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.


579B. Preparation for Ph.D. Preliminary Examina- tions. (2 to 16) Tutorial, to be arranged. Limited to graduate materials science and engineering students. Preparation for oral qualifying examination, including preliminary research on dissertation. S/U grading.


599. Research for and Preparation of Ph.D. Disserta- tion. (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
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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

Preliminary Examination in Mathematics

If students wish to enroll in Mathematics 1, 3A, or 31A, they must pass the Mathematics Diagnostic Test.

For specific dates and test locations, refer to the Schedule of Classes or the departmental website at http://www.math.ucla.edu/ugrad/diagnostic/diagnostic.shtml, or contact the Mathematics Student Services Office, 6356 Math Sciences.

Advanced Placement in Calculus

Students who have taken the Advanced Placement (AP) Calculus AB Test and obtained a score of 5 receive 4 units of credit and Mathematics 31A equivalency; those with a score of 4 receive 4 units of credit and Mathematics 31A equivalency. They may petition for 31A, 31B, or they may take courses 31A, 31B at UCLA, although they must still satisfy the course requisites (Mathematics Diagnostic Test). Students receiving a score of 4 or lower on the AB or 3 or lower on the BC examination should consult the undergraduate mathematics counselor prior to enrolling in a calculus course at UCLA.

Credit Limitations

Credit is given for at most one course in each of the following groups: (1) 3A, 31A; (2) 3B, 31B, 31E; (3) 110A, 117; (4) 174A, 174E.

Courses from only one of the following statistics sequences may be applied toward any mathematics major: (1) Statistics 100A (or Mathematics 170A), 100B, 100C or (2) former Statistics 110A, 110B.

Mathematics 2 is not open for credit to students with credit for any course from Mathematics 110A through 199.

Mathematics 132 is not open for credit to students with credit for Physics 132.

Mathematics 151A is not open for credit to students with credit for Electrical Engineering 103.

Mathematics 170A and Statistics 100A are not open for credit to students with credit for Electrical Engineering 131A.

Mathematics 174A and 174E are not open for credit to students with credit for Economics 141.

For lower division mathematics courses, students may not take or repeat a course for credit if it is a requisite for a more advanced lower division course for which they already have credit. This applies in particular to the repetition of courses (e.g., if students wish to repeat Mathematics 31B, they must do so before completing course 32B; if students wish to repeat Mathematics 3B or 31B or 32A, they must do so before completing course 33A).

For upper division mathematics courses, students may not take or repeat a lower sequence course for credit if it is part of a sequence for which they already have credit. This applies in particular to the repetition of courses (e.g., if students wish to repeat Mathematics 131A, they must do so before completing course 131B or 131B).

Students may not receive credit for both a course and the honors version of that course (e.g., they may not receive credit for both Mathematics 131A and 131AH).

Mathematics Upper Division Courses

Mathematics 115A, 131A, 132, 142, 151A, and 164 are offered each term. The remaining upper division courses are usually offered once or twice each year. The tentative class schedule for the forthcoming academic year is posted in the Student Services Office in February.
Mathematics B.S.

Mathematics Premajor

Students entering UCLA directly from high school or first-term transfer students who want to declare the Mathematics premajor at the time they apply for admission are automatically admitted to the premajor.

Current UCLA students need to file a petition with the Undergraduate Advising Office in 6356 Math Sciences. All students are identified as Mathematics premajors until they satisfy the following minimum requirements for the major:

1. Achieve grades of C or better in all major mathematics sequenced courses (Mathematics 31A, 31B, 32A, 32B, 33A, 33B),
2. Achieve a minimum 2.5 grade-point average in the calculus sequence with no more than two repeats, and
3. File a petition to declare the major before completing 160 quarter units.

Preparation for the Major

Required: Mathematics 31A, 31B, 32A, 32B, 33A, 33B, Physics 1A, Program in Computing 10A, and two courses from Chemistry and Biochemistry 20A, 20B, Economics 11, Life Sciences 1, Philosophy 31, 32, Physics 1B, 1C, 6B, 6C, Each course must be taken for a letter grade. The mathematics sequenced courses (Mathematics 31A, 31B, 32A, 32B, 33A, 33B) are calculated separately from the other preparation for the major courses and must be completed with a minimum overall 2.5 grade-point average and a grade of C or better in each course. The other preparation courses must be completed with a minimum overall 2.0 grade-point average and a grade of C- or better in each course.

Repetition of more than two mathematics sequenced courses or of any mathematics sequenced course more than once results in automatic dismissal from the major.

Freshman Students

Students must petition to declare the Mathematics major and can do so once they complete all of the mathematics sequenced courses and submit an application to enter the major before completing 160 quarter units. Admission into the major is based on student academic performance on the minimum requirements.

Transfer Students

Transfer applicants to the Mathematics major with 90 or more units must complete as many of the following introductory courses as possible prior to admission to UCLA: two years of calculus for majors, one calculus-based physics (mechanics) course, one C++ programming course, and two courses from general chemistry for majors, economics, symbolic logic, and calculus-based physics.

Refer to the UCLA Transfer Admission Guide 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.
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.

After satisfying the preparation for the major requirements, students need to petition to enter the major at the Undergraduate Advising Office.

The Major

Required: Mathematics 115A, 131A, either 131B or 132, 142; two two-term sequences from two of the following categories: numerical analysis — courses 151A and 151B, probability and statistics — courses 170A and 170B, or Statistics 100A and 100B, differential equations — courses 134 and 135; four courses from 106 through 109 and Statistics 100A through 102C (appropriate courses from other departments may be substituted for some of the additional courses provided departmental consent is given before such courses are taken). Each course must be taken for a letter grade. The 12 courses must be completed with a minimum overall grade-point average of 2.0, with grades of C– or better in Mathematics 115A and 131A.

It is strongly recommended that students take Mathematics 115A as one of their first upper division courses for the major.

Financial Actuarial Mathematics B.S.

Financial Actuarial Mathematics Premajor

Students entering UCLA directly from high school or first-term transfer students who want to declare the Financial Actuarial Mathematics premajor at the time they apply for admission are automatically admitted to the premajor.

Current UCLA students need to file a petition with the Undergraduate Advising Office in 6356 Math Sciences. All students are identified as Mathematics of Computation premajors until they satisfy the following minimum requirements for the major: (1) achieve grades of C or better in all premajor mathematics sequenced courses or of any mathematics sequenced course more than once results in automatic dismissal from the major.

Freshman Students

Students must petition to declare the Financial Actuarial Mathematics major and can do so once they complete all of the mathematics sequenced courses, all of the economics preparation courses, and submit an application to enter the major before completing 160 quarter units. Admission into the major is based on student academic performance on the minimum requirements.

Transfer Students

Transfer applicants to the Financial Actuarial 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 C++ programming course, one microeconomics theory course, one macroeconomics course, and two terms of accounting principle.

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: Eight mathematics/statistics courses including Mathematics 115A, 131A, 170A or Statistics 100A, 170B or Statistics 100B, 172A, 174A (or 174E or Economics 141 or Statistics C183); one two-term sequence from the following categories: life contingency actuarial models — courses 172B and 172C, or casualty loss models — courses 173A and 173B, and three courses from 172B through 173B, Economics 101 through 199B, Statistics 100C. 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 completed with an overall grade-point average of 2.0, with grades of C– or better in Mathematics 115A and 131A, as must the three courses from the Economics Department.

It is strongly recommended that students take Mathematics 115A as one of their first upper division courses for the major.

Mathematics of Computation B.S.

Mathematics of Computation Premajor

Students entering UCLA directly from high school or first-term transfer students who want to declare the Mathematics of Computation premajor at the time they apply for admission are automatically admitted to the premajor.

Current UCLA students need to file a petition with the Undergraduate Advising Office in 6356 Math Sciences. All students are identified as Mathematics of Computation premajors until they satisfy the following minimum requirements for the major: (1) achieve grades of C or better in all premajor mathematics sequenced courses (Mathematics 31A, 31B, 32A, 32B, 33A, 33B), (2) achieve a minimum 2.5 grade-point average in the calculus sequence with no more than two repeats, and (3) file a petition to declare the major before completing 160 quarter units.

Preparation for the Major

Required: Mathematics 31A, 31B, 32A, 32B, 33A, 33B, Economics 1, 2, 11, Management 1A, 1B, Program in Computing 10A. Each course must be taken for a letter grade. The economics preparation for the major courses (Economics 1, 2, 11, Management 1A, 1B) are calculated separately from the mathematics preparation for the major courses (Mathematics 31A, 31B, 32A, 32B, 33A, 33B, Program in Computing 10A). The economics preparation courses must be completed with a minimum overall 2.5 grade-point average and a grade of C or better in each course, as must the mathematics preparation courses.

Repetition of more than one economics preparation course, more than two mathematics preparation courses, or of any economics or mathematics preparation course more than once results in automatic dismissal from the major.

Freshman Students

Students must petition to declare the Financial Actuarial Mathematics major and can do so once they complete all of the mathematics sequenced courses, all of the economics preparation courses, and submit an application to enter the major before completing 160 quarter units. Admission into the major is based on student academic performance on the minimum requirements.

Transfer Students

Transfer applicants to the Mathematics of Computation major and can do so once they complete all of the mathematics sequenced courses and submit an application to enter the major before completing 160 quarter units. Admission into the major is based on student academic performance on the minimum requirements.

Preparation for the Major

Required: Mathematics 31A, 31B, 32A, 32B, 33A, 33B, 61, Physics 1A, 1B, Program in Computing 10A, 10B, 10C, and one course from Chemistry and Biochemistry 20A, 20B, Physics 1C. Each course must be taken for a letter grade. The mathematics sequenced courses (Mathematics 31A, 31B, 32A, 32B, 33A, 33B) are calculated separately from the other preparation for the major courses and must be completed with a minimum overall 2.5 grade-point average and a grade of C or better in each course. The other preparation courses must be completed with a minimum overall 2.0 grade-point average and a grade of C– or better in each course.

Repetition of more than two mathematics sequenced courses or of any mathematics sequenced course more than once results in automatic dismissal from the major.

Freshman Students

Students must petition to declare the Mathematics of Computation major and can do so once they complete all of the mathematics sequenced courses and submit an application to enter the major before completing 160 quarter units. Admission into the major is based on student academic performance on the minimum requirements.

Transfer Students

Transfer applicants to the Mathematics 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.
After satisfying the preparation for the major requirements, students need to petition to enter the major at the Undergraduate Advising Office.

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). Each course must be taken for a letter grade. The 14 courses must be completed with a minimum overall grade-point average of 2.0, with grades of C– or better in Mathematics 115A and 131A.

It is strongly recommended that students take Mathematics 115A as one of their first upper division courses for the major.

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 adviser, design their own program. They may also select one of the established programs: mathematics/history of science plan or medical and life sciences plan. In the past, Mathematics/Applied Science majors have combined the study of mathematics with fields such as atmospheric and oceanic sciences, biochemistry, biology, chemistry, economics, geography, physics, psychology, and statistics.

Students interested in designing an individual program should meet with the undergraduate adviser, 6356 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.

Mathematics/Applied Science Premajor

Students entering UCLA directly from high school or first-term transfer students who want to declare the Mathematics/Applied Science premajor at the time they apply for admission are automatically admitted to the premajor.

Current UCLA students need to file a petition with the Undergraduate Advising Office in 6356 Math Sciences. All students are identified as Mathematics/Applied Science premajors until they satisfy the following minimum requirements for the major: (1) achieve grades of C or better in all premajor mathematics sequenced courses (Mathematics 31A, 31B, 32A, 32B, 33A, 33B), (2) achieve a minimum 2.5 grade-point average in the calculus sequence with no more than two repeats, and (3) file a petition to declare the major before completing 160 quarter units.

Preparation for the Major

Required: Mathematics 31A, 31B, 32A, 32B, 33A, 33B, Program in Computing 10A. Additional preparation, varying with the individual program, may be required. Each course must be taken for a letter grade. The mathematics sequenced courses (Mathematics 31A, 31B, 32A, 32B, 33A, 33B) are calculated separately from the other preparation for the major courses and must be completed with a minimum overall 2.5 grade-point average and a grade of C or better in each course. The other preparation courses must be completed with a minimum overall 2.0 grade-point average and a grade of C– or better in each course.

Repetition of more than two mathematics sequenced courses or of any mathematics sequenced course more than once results in automatic dismissal from the major.

Freshman Students

Students must petition to declare the Mathematics/Applied Science major and can do so once they complete all of the mathematics sequenced courses, all of the economics lower division courses if they are required for the major, and submit an application to enter the major before completing 160 quarter units. Admission into the major is based on student academic performance on the minimum requirements.

Transfer Students

Transfer applicants to the Mathematics/Applied Science major with 90 or more units must complete as many of the following introductory courses as possible prior to admission to UCLA: two years of calculus for majors and one C++ programming course. Additional courses are required for each concentration plan.

Refer to the UCLA Transfer Admission Guide 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: Fourteen courses, seven in the Mathematics Department selected from Mathematics 106 through 199 and seven upper division courses in a related field selected from one or two other departments. Each course must be taken for a letter grade. The seven Mathematics Department courses must be completed with a minimum overall grade-point average of 2.0, with grades of C– or better in Mathematics 115A and 131A, as must the seven courses outside mathematics.

It is strongly recommended that students take Mathematics 115A as one of their first upper division courses for the major.

Mathematics/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. Each course must be taken for a letter grade. The mathematics sequenced courses (Mathematics 31A, 31B, 32A, 32B, 33A, 33B) are calculated separately from the other preparation for the major courses and must be completed with a minimum overall 2.5 grade-point average and a grade of C or better in each course. The other preparation courses must be completed with a minimum overall 2.0 grade-point average and a grade of C– or better in each course.

Repetition of more than two mathematics sequenced courses or of any mathematics sequenced course more than once results in automatic dismissal from the major.
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. Each course must be taken for a letter grade. The eight Mathematics Department courses must be completed with a minimum overall grade-point average of 2.0, with grades of C– or better in Mathematics 115A and 131A, as must the six outside courses from history, philosophy, or physiological science.

It is strongly recommended that students take Mathematics 115A as one of their first upper division courses for the major.

Medical and Life Sciences Plan

Preparation for the Major

Required: Mathematics 31A, 31B, 32A, 32B, 33A, 33B, Chemistry and Biochemistry 20A, 20B, 20L, 30A, 30AL, Life Sciences 1, 2, 3, 4, Physics 1A, 1B, Program in Computing 10A. Each course must be taken for a letter grade. The mathematics sequenced courses (Mathematics 31A, 31B, 32A, 32B, 33A, 33B) are calculated separately from the other preparation for the major courses and must be completed with a minimum overall 2.5 grade-point average and a grade of C or better in each course. The other preparation courses must be completed with a minimum overall 2.0 grade-point average and a grade of C– or better in each course.

Repetition of more than two mathematics sequenced courses or of any mathematics sequenced course more than once results in automatic dismissal from the major.

The Major

Required: Seven mathematics courses, including Mathematics 115A, 131A, 134, 151A, 170A, 170B, and one course from 110A through 199 and Statistics 100B through 101C; six outside courses, including Neuroscience M101A, M101B, and M101C, and three courses from Biomathematics 110, 160, Bio-statistics 100A, Chemistry and Biochemistry CM160A, Computer Science CM186, Ecology and Evolutionary Biology C119A, 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. Each course must be taken for a letter grade. The seven Mathematics Department courses must be completed with a minimum overall grade-point average of 2.0, with grades of C– or better in Mathematics 115A and 131A, as must the six outside courses.

It is strongly recommended that students take Mathematics 115A as one of their first upper division courses for the major.

Mathematics for Teaching

B.S.

Capstone Major

The Mathematics for Teaching major is designed primarily for students planning to teach mathematics at the high school level. It provides exposure to a broad range of mathematical topics, especially those appropriate for the prospective teacher. Students planning to pursue graduate studies in mathematics or related fields are encouraged to enter the Mathematics, Applied Mathematics, or Mathematics of Computation major.

Mathematics for Teaching Premajor

Students entering UCLA directly from high school or first-term transfer students who want to declare the Mathematics for Teaching premajor at the time they apply for admission are automatically admitted to the premajor.

Current UCLA students need to file a petition with the Undergraduate Advising Office in 6356 Math Sciences. All students are identified as Mathematics for Teaching premajors until they satisfy the following minimum requirements for the major: (1) achieve grades of C or better in all premajor mathematics sequenced courses (Mathematics 31A, 31B, 32A, 32B, 33A, 33B), (2) achieve a minimum 2.5 grade-point average in the calculus sequence with no more than two repeats, and (3) file a petition to declare the major before completing 160 quarter units.

Preparation for the Major

Required: Mathematics 31A, 31B, 32A, 32B, 33A, 33B, 61, Physics 1A or 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 taken for a letter grade. The mathematics sequenced courses (Mathematics 31A, 31B, 32A, 32B, 33A, 33B) are calculated separately from the other preparation for the major courses and must be completed with a minimum overall 2.5 grade-point average and a grade of C or better in each course. The other preparation courses must be completed with a minimum overall 2.0 grade-point average and a grade of C– or better in each course.

Repetition of more than two mathematics sequenced courses or of any mathematics sequenced course more than once results in automatic dismissal from the major.

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/Applied Science, or Mathematics/Computing may 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++ programming course, 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/admission for up-to-date information regarding transfer selection for admission.

After satisfying the preparation for the major requirements, students need to petition to enter the major at the Undergraduate Advising Office.

The Major

Required: Mathematics 106, 110A or 117, 115A, 120A or 123, 131A, 170A or Statistics 100A, Statistics 100B, one course from Mathematics 110B through 191H or Statistics 100C, one course from Mathematics 131B through 136, one course from 142 through 167, and a capstone series in the senior year (courses 105A, 105B, 105C). Each course must be taken for a letter grade. The 13 courses must be completed with a minimum overall grade-point average of 2.0, with grades of C– or better in Mathematics 115A and 131A.

It is strongly recommended that students take Mathematics 115A as one of their first upper division courses for the major.
Graduate Degrees, available at the Graduate Division website, http://grad.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 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. Requisite: 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 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 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.

3. **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 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.

4. **Calculus for Life Sciences Students.** (4) Lecture, three hours; discussion, one hour. Requisite: course 3A with grade of C– or better. Not open for credit to students with credit for course 31B. Techniques and applications of integral calculus, introduction to differential equations and multivariable differential calculus. P/NP or letter grading.

5. **Probability for Life Sciences Students.** (4) Lecture, three hours; discussion, one hour. Requisite: concurrent or subsequent course 3A with grade of C– or better. Elementary probability, probability distributions, random variables, and limit theorems. P/NP or letter grading.

6. **Integral and Differential Calculus.** (4) Lecture, three hours; discussion, one hour. Preparation: at least three and one-half years of high school mathematics (including some coordinate geometry and trigonometry). Requisite: successful completion of Mathematics Diagnostic Test or course 1 with grade of C– or better. Differential calculus and applications; introduction to integration. P/NP or letter grading.

7. **Workshop in Differential Calculus.** (1) Discussion, one hour. Corequisite: course 3A. Supplementary techniques and applications for solving problems in integral calculus. Limits of investigation set by individual instructor. P/NP grading.

8. **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 31B. Integration sequence and applications for solving problems in integral calculus. Limits of investigation set by individual instructor. P/NP or letter grading.

9. **Integration and Infinite Series (Honors).** (4) Lecture, three hours; discussion, one hour. Requisite: course 31A with grade of B or better. Honors course parallel to course 31B. P/NP or letter grading.

10. **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.

11. **Calculus for Economics Students.** (4) Lecture, three hours; discussion, one hour. Requisite: concurrent or subsequent course 31A with grade of C– or better. Not open for credit to students with credit for course 31B, 3C, or 31B. Calculus for applications to economics. Partial differentiation, implicit functions, exponential and logarithmic functions, extreme value, constrained optimization. P/NP or letter grading.

12. **Course in Several Variables.** (4) Lecture, three hours; discussion, one hour. Requisite: course 31A with grade of C– or better. Introduction to differential calculus of several variables, vector field theory. P/NP or letter grading.

13. **Course in Several Variables (Honors).** (4) Lecture, three hours; discussion, one hour. Requisite: course 31A with grade of C– or better. Introduction to differential calculus of several variables, vector field theory. P/NP or letter grading.

14. **Linear Algebra and Applications.** (4) Lecture, three hours; discussion, one hour. Requisite: concurrent or subsequent course 31A with grade of C– or better. Not open for credit to students with credit for course 31B or 31B or 32A with grade of C– or better. Honors sequence parallel to courses 32A, 32B, P/NP or letter grading.

15. **Linear Algebra and Applications (Honors).** (4) Lecture, three hours; discussion, one hour. Requisite: concurrent or subsequent course 31A with grade of C– or better. Not open for credit to students with credit for course 31B or 31B or 32A with grade of C– or better. Honors sequence parallel to courses 32A, 32B, P/NP or letter grading.

16. **Differential Equations.** (4) Lecture, three hours; discussion, one hour. Requisite: concurrent or subsequent course 31A with grade of C– or better. Highly recommended: course 33A. First-order, linear differential equations; second-order, linear differential equations with constant coefficients; power series solutions; linear systems. P/NP or letter grading.

17. **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.

18. **Introduction to Discrete Structures.** (4) Lecture, three hours; discussion, one hour. Requisites: courses 31A, 31B. Not open for credit to students with credit for course 180 or former course 113. Discrete structures commonly used in computer science and mathematics, including sets and relations, permutations and combinations, graphs and trees, induction. P/NP or letter grading.

19. **Classroom Practice 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, 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.
95. Transition to Upper Division Mathematics. (4) Lecture, three hours; discussion, one hour. Enforced prerequisites: courses 31A and 31B. Not open for credit to students with credit for course 131A or 132. Introduction to rigorous methods of proof-based upper division mathematics courses. Basic logic; structure of mathematical proofs; sets, functions, and cardinality; natural numbers and induction; construction of real numbers; topology of real numbers; sequences and convergence; continuity. May not be applied toward major requirements. P/NP or letter grading.

97. Variable Topics in Mathematics. (4) Lecture, three hours; discussion, one hour. Study of selected topics in mathematics at introductory level. P/NP or letter grading.

98XA, 98XB PEERS Collaborative Learning Workshops for Life Sciences Majors. (1) Laboratory, three hours. Corequisite: associated undergraduate lecture course in mathematics for life sciences majors. Development of intuition and problem-solving skills in collaborative learning environment. May be repeated four times, but only one unit may be applied toward graduation. P/NP grading.

98XAX, 98XBX PEERS Collaborative Learning Workshops for Physical Sciences and Engineering Majors. (1) Laboratory, three hours. Corequisite: associated undergraduate lecture course in mathematics for physical sciences and engineering majors. Development of intuition and problem-solving skills in collaborative learning environment. May be repeated four times, but only one unit may be applied toward graduation. P/NP grading.

Upper Division Courses

General and Teacher Training

100. Problem Solving. (4) Lecture, three hours. Enforced prerequisite: course 31B with grade of C– or better. Problem-solving techniques and mathematical topics useful for preparation for Putnam Examination and similar competitions. Continued fractions, inequalities, modular arithmetic, closed form evaluation of sums and products, special summations, combinatorics, functions, and polynomials, other nonroutine problems. Participants expected to take Putnam Examination. P/NP grading.

103A-103B. Observation and Participation: Mathematics Instruction. (2-2-3) Seminar, one hour; fieldwork (classroom observation and participation), two hours. Corequisites: courses 31A, 31B, 32A, 33A, and 33B. Course 103A is enforced prerequisite to 103B, which is a required prerequisite to 103C. Observation, participation, or tutoring in mathematics classrooms at middle school and secondary levels. May be repeated for credit. P/NP (undergraduates) or S/U (graduates) grading.

105A. 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. 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 polynomial, rational, and transcendental functions and their applications to topics in analysis, such as geometry and algebraic constructions, least upper bound axiom, etc. P/NP grading.

105C. Mathematics and Pedagogy for Teaching Secondary School Mathematics. (4) Lecture, four hours; fieldwork, 30 minutes. Requisites: courses 105A, 105B, 110A (or 117), 120A (or 123), and 131A, with grades of C– or better. Mathematical knowledge and research-based pedagogy needed for teaching key analysis, probability, and statistics 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 systems, development of algebra through the 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. P/NP or letter grading. Requisite: course 115A. Not open for credit to students with credit for course 117. Rings of integers, integral domains, fields, polynomial domains, unique factorization. 110B. Lecture, three hours; discussion, one hour. Requisites: courses 110A or 117. Groups, structure of finite groups.

110AH-110BH. Algebra (Honors). (4-4) Lecture, three hours; discussion, one hour. Honors sequence parallel to courses 110A, 110B.

110C. Algebra. (4-4) 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, selection of primes, algebraic number theory, Diophantine equations.

114C. Computability Theory. (4) Lecture, three hours; discussion, one hour. Requisite: course 110A or 131A 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. Arithmetical hierarchy. P/NP or letter grading.

114L. Mathematical Logic. (4) Lecture, three hours; discussion, one hour. Requisite: course 110A or 131A or Philosophy 135. Introduction to mathematical logic; aiming primarily at completeness and incompleteness theorems of Godel. Propositional and predicate logic; syntax and semantics; formal deduction; completeness; completeness of first-order theories; Skolem/Godel theorems. Formal number theory; nonstandard models; Godel incompleteness theorem. P/NP or letter grading.

114S. Introduction to Set Theory. (4) Same as Philosophy 134A. 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; eigen-vector theory. 115B. Lecture, three hours; discussion, one hour. Requisite: course 115A. Linear transformations, conjugate spaces, duality; theory of a single linear transformation; canonical normal forms; bilinear and quadratic forms; Euclidean and unitary spaces, symmetric skew and orthogonal linear transformations, polar decomposition.

115AH. Linear Algebra (Honors). (5) Lecture, three hours; discussion, two hours. Requisite: course 33A with 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 130. Introduction to mathematical cryptology using methods of number theory, algebra, probability, and computers. Topics include public-key cryptosystems, one-way functions, signatures, key exchange, groups, primes, pseudoprimes, primality tests, quadratic reciprocity, factoring, rho method, RSA, discrete logs. P/NP or letter grading.

117. Algebra for Applications. (4) Lecture, three hours; discussion, one hour. Requisite: course 115A. Not open for credit to students with credit for course 110A. Integers, congruences, fields, applications of finite fields; polynomials; permutations, introduction to groups.

Geometry and Topology

120A-120B. Differential Geometry. (4-4) Lecture, three hours; discussion, one hour. Requisites: courses 32B, 33B, 113A, 113B. Course 120A is requisite to 120B. Curves in 3-space, Frenet formulas, surfaces in 3-space, normal curvature, Gaussian curvature, congruence of curves and surfaces, intrinsic geometry of surfaces, isometries, geodesics, Gauss/Bonnet theorem. P/NP or letter grading.

121. Introduction to Topology. (4) Lecture, three hours; discussion, one hour. Requisite: course 131A. Metric and topological spaces, completeness, connectedness, connectedness properties, 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 and non-Euclidean geometries, projective geometry, Poincare model, independence of parallel postulate.

Analysis

131A-131B. Analysis. (4-4) Lecture, three hours; discussion, one hour. 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, 113A, 131A. Derivatives, Riemann integrals, sequences and series of functions, power series, Fourier series.

131AH-131BH. Analysis (Honors). (4-4) Lecture, three hours; discussion, one hour. Requisites: courses 131AH; courses 32B and 33B, with grades of B or better. Honors course 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 geometry 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
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 physics, chemistry, biology, economics, and traffic dynamics.

143. Analytic Mechanics. (4) Lecture; three hours; discussion, one hour. Requisites: courses 32A, 33A. 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. Integral equations, Green’s function, and calculus of variations. Selected applications from control theory, optics, dynamical systems, and other engineering problems.

149. Mathematics of Computer Graphics. (4) Lecture, three hours; discussion, one hour. Requisites: course 115A, and Program in Computing 10A or equivalent knowledge of programming in either Pascal or C language. Study of homogeneous coordinates, projective transformations, interpolating and approximating curves, representation of surfaces, and other mathematical techniques useful for computer graphics.


167. Mathematical Game Theory. (4) Lecture, three hours; discussion, one hour. Requisite: course 115A. Introduction to game theory, problems from economics, and other fields, with emphasis on the spatial models. P/NP or letter grading.


170A. Probability Theory. (4) Lecture, three hours; discussion, one hour. Requisites: courses 32B, 33A. Not open to students with credit for Electrical Engineering 131A or Statistics 101A. Probability distributions, random variables and vectors, expectation. P/NP or letter grading.


173B. Casualty Loss Models II. (4) Lecture, four hours. Enforced requisite: course 173A. Designed to prepare students for Society of Actuaries Construction and Evaluation of Actuarial Models examination. Construction of parametric loss models and introduction to credibility theory that provides tools to utilize common loss information, such as past loss information, to predict future outcomes. Use of simulation to model future events. Letter grading.


174E. Mathematics of Finance for Mathematics/Economics Students. (4) Formerly numbered 174.) Lecture, three hours; discussion, one hour. Enforced requisites: courses 32B, 33B, 115A. Permutations and combinations, counting principles, recurrence relations and 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. Not open for credit to students with credit for Computer Science 170. Graphs, greedy algorithms, divide and conquer algorithms, dynamic programming, network flow. Emphasis on designing efficient algorithms useful in diverse areas, such as bioinformatics and allocation of resources. P/NP or letter grading.

184. Topics in Combinatorics. (4) Lecture, three hours; discussion, one hour. Requisites: courses 115A, 180. 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 repeated for credit. P/NP or letter grading.
Special Studies
190A. History and Development of Mathematics.
190B. Number Theory.
190C. Algebra.
190D. Logic.
190E. Geometry.
190F. Topology.
190G. 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 contained in regular mathematics upper division curriculum. Reading, discussion, and development of culminating project. May be repeated for credit with topic and/or instructor change. P/NP or letter grading.
191H. Honors Research Seminars: Mathematics. 
191I. Seminar, three hours. Participating seminar on advanced topics in mathematics. Content varies from year to year. May be repeated for credit by petition. P/NP or letter grading.
195. Community Internships in Mathematics Education. (4) Tutorial, to be arranged. Limited to juniors/seniors. Internship to be supervised by Center for Community Learning and Mathematics Department. Students must meet on regular basis with instructor; provide periodic reports of their experience, have as signed 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 or 4) Tutorial, three hours per week per unit. Limited to juniors/seniors. At discretion of chair and subject to availability of staff, individual intensive study of topics suitable for undergraduate course credit but not specifically offered as separate courses. Scheduled meetings will be arranged between faculty member and student. Assigned reading and tangible evidence of mastery of subject matter required. May be repeated for maximum of 12 units, but no more than one 197 or 199 course may be applied toward upper division courses required for majors offered by Mathematics Department. Individual contract required. P/NP or letter grading.
199. Directed Research or Senior Project in Mathematics, (2 or 4) Tutorial, three hours per week per unit. Limited to juniors/seniors. Supervised individual research under guidance of faculty mentor. 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-201C. Topics in Algebra and Analysis. (4-4-4) Preparation: bachelor's degree in mathematics. Designed for mathematics/education program students. Important ideas of algebra, geometry, and calculus leading effectively from elementary to modern mathematics. Approaches to number system, point sets, geometric interpretations of algebra and analysis, integration, differentiation, series and analytic functions. May not be applied toward M.A. degree requirements.
202A-202B. Mathematical Models and Applications. (4-4) Preparation: bachelor's degree in mathematics. Designed for mathematics/education program students. Introductions to mathematical situations 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.
204. Master's Analysis. (4) Lecture, four hours; discussion, one hour. Rigorous treatment of fundamental results of analysis. Applications to contemporary research. Preparation for analysis portion of UCLA Mathematics Basic Examination that is required of M.A. and Ph.D. students. S/U or letter grading.
205A-205B-205C. Number Theory. (4-4-4) Lecture, three hours. Requisites: courses 210A, 216A, Algebraic number theory, including ideal theory, valuations, local fields, cyclotomic fields. Introduction to class-field theory, analytic number theory, L-functions and class number formulas, and modular forms. S/U or letter grading.
207A-207B-207C. Topics in Number Theory. (4-4-4) Lecture, three hours. Adelic analysis on GL(1) and GL(2), especially Tate thesis and Hecke theory, automorphic representation. Partiallyrimed theoretical applications. Structures of graphs, matching theory, duality theorems. Packings, packings, coverings, statistical designs, difference sets, triple systems, finite planes. Configurations, polyhedra, Ramsey theory, finite and transfinite, and applications.
207A-207B-207C. Topics in Number Theory. (4-4-4) Lecture, three hours. Adelic analysis on GL(1) and GL(2), especially Tate thesis and Hecke theory, automorphic representation. Partiallyrimed theoretical applications. Structures of graphs, matching theory, duality theorems. Packings, packings, coverings, statistical designs, difference sets, triple systems, finite planes. Configurations, polyhedra, Ramsey theory, finite and transfinite, and applications.
209A. Cryptography. (4) (Same as Computer Science M282A) Lecture, four hours; outside study, eight hours. Theory of cryptography, stressing rigorous definitions and proofs of security. Topics include notions of hardness, one-way functions, hard-core bits, pseudorandom generators, pseudorandom functions and pseudorandom permutations, semantic security, public-key and private-key encryption, secret-sharing, message authentication, digital signatures, interactive proofs, zero-knowledge proofs, collision-resistant hash functions, one-way functions, collision-resistant hash functions, key-agreement, contract signing, and two-party secure computation with static security. Letter grading.
209B. Cryptographic Protocols. (4) (Same as Computer Science M282B) Lecture, four hours. Requisites: course M209A. Consideration of advanced cryptographic protocol design and analysis. Topics include noninteractive zero-knowledge proofs; zero-knowledge arguments for non-black-box zero-knowledge; IP=PSPACE proof, stronger notions of security for public-key encryption, including chosen-ciphertext security; secure multiparty computation 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; zero-knowledge protocols; identification protocols; digital cash schemes; lower bounds on use of cryptographic primitives, software obfuscation. May be repeated for credit with topic change. Letter grading.

Algebra
210A-210B-210C. Algebra. (4-4-4) Requisites: courses 110A, 110B, 110C. Students with credit for courses 110B and/or 110C cannot receive M.A. degree credit for courses 110B and/or 110C. May not be repeated and may not be applied toward M.A. degree requirements.
211. Structure of Rings. (4) Requisite: course 210A. Radical, irreducible modules and primitive 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 dimension of rings and modules.
213A-213B. Theory of Groups. (4-4) Requisite: course 210A. Topics in group theory, transfer theory, infinite Abelian groups, free products and presentations of groups, soluble and nilpotent groups, classical groups, algebraic groups.
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.
216A-216B-216C. Further Topics in Algebra. (4-4-4) Formerly numbered as 216A-216B-216C. Requisites: courses 210A, 210B, 210C. Closer examination of areas of current research in algebra, including algebraic geometry and K-theory. Variable content may include Abelian varieties, Tate cohomology, Hodge theory, geometry over finite fields, K-theory, homotopical algebra, and derived algebraic geometry. May be repeated for credit by petition. S/U or letter grading.
217A. 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, Seiberg/Witten theory, conformal field theory, Calabi/Yau manifolds, mirror symmetry and duality, integrable systems. S/U grading.
218A. Discrete Mathematics. (4-4) Requisite: course 210A. Linear algebra, basic counting techniques, second movement method, local lemma, correlation inequalities, martingales, large deviation inequalities, Janson and Talagrand inequalities, and pseudo-randomness. S/U or letter grading.
218C. Discrete Mathematics. (4) Lecture, three hours. Examination of variety of methods, approaches, and techniques that were developed in last
an (4-4) Lecture, three hours. Requisites: course 210A. Partially ordered sets, lattices, divisibility, modular-ity; completeness, interaction with combinatorics, to-pology, and logic; algebraic systems, congruence lattices, sublattices, congruence laws, equational bases, applications to lattices.

223C. Topics in Computability Theory. (4) Lecture, three hours. Requisites: courses 220A, 220B. Degree of unsolvability, recursively enumerable sets, undecidable theories; inductive definitions, admissible sets and ordinals; recursion in higher types; recur-sion and complexity. Topics vary from year to year. May be repeated for credit with consent of instructor. S/U or letter grading.

223D. Topics in Descriptive Set Theory. (4) Lecture, three hours. Requisites: courses 220A, 220B. Classical and effective results on Borel and projective sets; infinite information and principle of determinacy; consequences of determinacy, including periodicity, structure theory of pointclasses, and partition properties. Topics vary from year to year. May be repeated for credit with consent of instructor. S/U or letter grading.

223M. Topics in Model Theory. (4) Lecture, three hours. Requisites: courses 220A, 220B. Ultraproducts, preservation theorems, interpolation theorems, saturated structures, categoricity, two-cardinal theories, enriched languages, soft model theory, and applied model theory. Topics vary from year to year. May be repeated for credit with consent of instructor.

223S. Topics in Set Theory. (4) Lecture, three hours. Requisites: courses 220A, 220B, 220C. Forcing and independence results, including independence of continuum hypothesis and independence of axiom of choice; inner model theory; large cardinals; proofs of determinacy; combinatorial set theory. Topics vary from year to year. May be repeated for credit with consent of instructor. S/U or letter grading.

Geometry and Topology

225A. Differential Topology. (4) Lecture, three hours; discussion, one hour. Manifolds, tangent vectors, smooth maps, tangent bundles and vector bundles in general, vector fields and integral curves, Sard theorem on measure of critical values, embedding theorem, transversality, degree theory, Lefschetz fixed-point theorem, Euler characteristic, Ehresmann theorem that submersions are locally trivial fibrations. S/U or letter grading.

225B. Differential Geometry. (4) Lecture, three hours; discussion, one hour. Lie derivatives, integrable distributions and Frobenius theorem, differential forms, integration theory, de Rham co-homology, including Mayer/Vietoris sequence, Poincaré duality, Thom classes, degree theory and Euler characteristic revisited from viewpoint of de Rham cohomology, Riemanian metrics, gradients, volume forms, and interpretation of classical integral theorems as aspects of Stokes theorem for differential forms. S/U or letter grading.

225C. Algebraic Topology. (4) Lecture, three hours; discussion, one hour. Basic concepts of homotopy theory, fundamental group and covering spaces, singular homology and cohomology theory, axioms of homo- mology theory, Mayer/Vietoris sequence, calculation of 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 coeffi-cients. S/U or letter grading.

226A-226B. Differential Geometry. (4-4-4) Lecture, three hours. Requisites: course 225A. Manifold theory; connections, curvature, torsion, and parallel-ism; Riemannian manifolds; completeness, sub-manifolds, constant curvature. Geodesics; conjugate points, variational methods, Myers theorem, nonposi-tive curvature. Further topics such as pinched mani-folds, integral geometry, Kahler manifolds, symmetric spaces.


234. Topics in Differential Geometry. (4) Lecture, three hours. Requisites: courses 225A, 225B. Complex and Kahler geometry, Hodge theory, homoge-neous manifolds and symmetric spaces, finiteness and compactness theorems for Riemannian mani-folds, almost flat manifolds, closed geodesics, mani-folds of positive scalar curvature, manifolds of con-stant 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, sub-manifolds (e.g., knots and links). 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, charac-teristic classes, generalized homology and cohomolo-gy theories. Topics vary from year to year. May be repeated for credit by petition.

238A-238B. Dynamical Systems. (4-4) Lecture, three hours. Recommended preparation: first-year analysis courses. Topics include qualitative theory of differential equations, bifurcation theory, and Hamilto-nian systems; stability of solutions, including hyper-bolic theory and quasiperiodic dynamics; ergodic theo-ry; low-dimensional dynamics. S/U or letter grading.

M268B. Topics in Functional Analysis for Applied Mathematics and Engineering. (4) Requisite: course 255A. Topics include Banach algebras, operators on Banach spaces and Hilbert space, semigroups of operators, linear topological vector spaces, and other related areas.


Applied Mathematics


266D-266E. Applied Differential Equations. (4-4) Requisites: courses 266A, 266B, 266C. Advanced 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, systems with multiple time scales, and applications to fluid mechanics.
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 1S or 10A; may not be taken concurrently with course 1S or 10A. Fundamentals of computers and computing: editors, spreadsheets, file manager, machine organization and computer hardware; Internet; software applications. P/NP or letter grading.

2. 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.

3. Introduction to Computing for Social Sciences and Humanities. (4) Lecture, three hours; discussion, two hours. No prior programming knowledge required. Not open for credit to students pursuing specializations in Computing or to students with credit for course 20A. Basic principles of object-oriented programming and concepts, with applications from social sciences and humanities. Overview of Java programming language, programming with objects, control structures and functions, classes and object-oriented design, event-driven programming, application to multimedia models. P/NP or letter grading.

4. Introduction to Programming. (5) Lecture, three hours; discussion, two hours; laboratory, eight hours. Recommended requisite for students with no prior computing experience. Course 1. Prior programming experience assumed. Basic principles of programming, using C++; algorithmic, procedural problem solving; program design and development; basic data types, control structures, and functions; control arrays and pointers; introduction to classes for programmer-defined data types. P/NP or letter grading.

5. Intermediate Programming. (5) Lecture, three hours; discussion, two hours; laboratory, eight hours. Enforced requisite: course 10A. Advanced data types and their implementation using C++ class mechanism; dynamic data structures, including linked lists, stacks, queues, trees, and hash tables; applications; object-oriented programming and software reuse; recursion; algorithms for sorting and searching. P/NP or letter grading.

6. Advanced Programming. (5) Lecture, three hours; discussion, two hours; laboratory, eight hours. Enforced prerequisite: course 10B. More advanced algorithms and data structures techniques; additional emphasis on algorithmic efficiency; advanced features of C++, such as inheritance and virtual functions; graph algorithms. P/NP or letter grading.


8. Principles of Java Language with Applications. (5) Lecture, three hours; discussion, two hours; laboratory, eight hours. Enforced requisite: course 10A. Further aspects of use of classes, graph components, exception handling, multithreading, and multimedia. Advanced topics may include networking, servlets, database connectivity, and JavaBeans. P/NP or letter grading.

9. Advanced Aspects of Java Language with Applications. (5) Lecture, three hours; discussion, two hours; laboratory, eight hours. Enforced requisite: course 20A. Further aspects of use of classes, graph components, exception handling, multithreading, and multimedia. Additional topics may include networking, servlets, database connectivity, and JavaBeans. P/NP or letter grading.

10. Seminar: Enterprise Computing with Java. (5) Lecture, three hours; discussion, two hours; laboratory, five hours. Enforced requisite: course 20B. Overview of Enterprise Java APIs: remote method invocation, database access with SQL, servlets, and JSP. Issues in implementation of server-side Java application. Use of Java in conjunction with XML, individual or group projects and presentations. P/NP or letter grading.

11. Machine Organization and Assembly Language Programming. (3) Lecture, three hours; discussion, two hours; laboratory, five hours. Enforced requisite: course 10B. Description of machine organization and operation. Representation of information, instruction sets and formats, addressing modes, memory organization and management, input/output (I/O) processing and interrupts. P/NP or letter grading.

12. Introduction to Programming for Internet. (5) Lecture, three hours; discussion, two hours; laboratory, eight hours. Enforced requisite: course 10A. Recommended course 10B. Introduction to core technologies of Internet, with focus on client-side Web programming. Fundamental protocols, static Web pages, Perl language, and CGI Gateway Interface. XML, P/NP or letter grading.

13. Advanced Topics in Programming for Internet. (5) Lecture, three hours; discussion, two hours; laboratory, eight hours. Enforced requisite: course 10A. Study of advanced topics in Web programming, with focus on server-side technologies. P/NP or letter grading.

14. Data Structures and Algorithms. (4) Lecture, three hours; discussion, two hours; laboratory, five hours. Enforced requisite: course 10B, Mathematics
97. Special Topics in Programming. (1 to 4) Lecture, one to three hours; discussion, zero to one hour. Enforced prerequisite: course 10A. Variable topics in programming not covered in regular program in computing courses. May be repeated for credit with topic change. P/NP or letter grading.

Upper Division Courses

110. Parallel and Distributed Computing. (5) Lecture, three hours; discussion, two hours; laboratory, eight hours. Prerequisite: course 10B or equivalent familiarity with programming in C or C++ language. Introduction to programming of parallel computers. Shared and distributed memory parallel architectures; currently available parallel machines; parallel algorithms and program development; estimation of algorithmic performance; distributed computing; selected advanced topics. P/NP or letter grading.

130. Cryptography. (4) Lecture, three hours; discussion, one hour; laboratory, three hours. Prerequisites: course 10B, Mathematics 115A. Design and analysis of cryptosystems for confidentiality and authentication. Classical cryptosystems and their security, modern private-key cryptosystems and applications, public-key cryptography and applications; generating prime numbers, factoring integers, discrete logarithms, digital signatures, perfect secrecy. P/NP or letter grading.

187. Advanced Variable Topics in Programming. (4) Lecture, three hours; discussion, one hour. Variable topics in programming and mathematics of programming not covered in regular program in computing courses. May be repeated for credit with topic change. P/NP or letter grading.

Graduate Courses

285C-285L. Seminars. (4 each) Seminar, three hours. Considered equivalent to Mathematics 285A through 285L for purposes of degree requirements. Topics in various computational fields by means of lectures and informal conferences with staff members. S/U or letter grading.

285C. Computational Algebra.

285D. Logic and Theory of Computation.


285K. Randomness and Computation.

285L. Computational Statistics.


375. Teaching Apprentice Practicum. (1 to 4) Seminar, to be arranged. Preparation: apprentice personnel employment as teaching assistant, associate, or fellow. Teaching apprenticeship under active guidance and supervision of regular faculty member responsible for curriculum and instruction at UCLA. May be repeated for credit. S/U grading.

Scope and Objectives

The 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, oceanic 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.

Grades of the program are employed by private and public weather products firms, consulting companies, public utilities, and as science teachers at the elementary and secondary levels.

Undergraduate Study

The Mathematics/Atmospheric and Oceanic Sciences major is a designated capstone major. Students acquire experience in conceiving and executing research projects designed to evaluate hypotheses and complete an individual project or thesis selected with the assistance of the program advisers and faculty mentor. The topic should reflect integrative application of mathematics to atmospheric and oceanic sciences. Students are expected to prepare a significant independent piece of work that applies knowledge gained in their coursework in a new and unique way.

Preparation for the Major

Required: Mathematics 31A, 31B, 32A, 32B, 33A, 33B, Physics 1A, 1B, 1C, Program in Computing 10A, and two courses selected from Atmospheric and Oceanic Sciences 1, 2, 3, 5, Physics 4AL and 4BL are recommended but not required. Chemistry and Biochemistry 14A and 14B (or 20A and 20B) may also be required, depending on atmospheric and oceanic sciences upper division course selection. Each course must be taken for a letter grade and must be passed with a grade of C– or better, and students must have a minimum overall grade-point average of 2.0 for the courses.

Transfer Students

Transfer applicants to the Mathematics/Atmospheric and Oceanic Sciences major with 90 or more units must complete as many of the following introductory courses as possible prior to admission to UCLA: two years of calculus for majors, physics courses equivalent to Physics 1A, 1B, and 1C, and one C++ programming course.

Refer to the UCLA Transfer Admission Guide 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, one of which must be 115B, 131B, 151B, or 170B; six atmospheric and oceanic sciences courses, including three core courses selected from Atmospheric and Oceanic Sciences 101, 102, 103, 104, M105, and three elective courses selected from the five listed above (if not taken to satisfy the core requirement) or from C110, C115, M120, 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.
Scopes 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.

Mathematics/Economics Premajor

Students entering UCLA directly from high school or first-term transfer students who want to declare the Mathematics/Economics premajor at the time they apply for admission are automatically admitted to the premajor.

Current UCLA students need to file a petition with the Undergraduate Advising Office in 6356 Math Sciences. All students are identified as Mathematics/Economics premajors until they satisfy the following minimum requirements for the major: (1) achieve grades of C or better in all premajor mathematics sequenced courses (Mathematics 31A, 31B, 32A, 32B, 33A, 33B, 61, Program in Computing 10A) with a minimum 2.5 grade-point average and no more than two repeats, (2) achieve grades of C or better in all premajor economics courses (Economics 1, 2, 11) with a minimum 2.5 grade-point average and no more than one repeat, and (3) file a petition to declare the major before completing 160 quarter units.

Preparation for the Major

Required: Mathematics 31A, 31B, 32A, 32B, 33A, 33B, 61, Economics 1, 2, 11, Program in Computing 10A, one Writing II course. Each course must be taken for a letter grade. The economics preparation for the major courses (Economics 1, 2, 11) are calculated separately from the mathematics preparation for the major courses (Mathematics 31A, 31B, 32A, 32B, 33A, 33B, 61, Program in Computing 10A). The economics preparation courses must be completed with a minimum overall 2.5 grade-point average and a grade of C or better in each course, as must the mathematics preparation courses. Students must receive a grade of C or better in the Writing II course.

Repetition of more than one economics preparation course, more than two mathematics preparation courses, or of any economics or mathematics preparation course more than once results in automatic dismissal from the major.

Transfer Students

Transfer applicants to the Mathematics/Economics major with 90 or more units must complete as many of the following introductory courses as possible prior to admission to UCLA: two years of calculus for majors, one introduction to discrete structures course, one microeconomic theory course, one 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/admissionHandlerContext.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, 174E (or 174A or Economics 141 or Statistics C183); five economics courses, including Economics 101, 102, 103, and two additional courses from 106E through 198B. 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 completed with an overall grade-point average of 2.0, with grades of C– or better in Mathematics 115A and 131A, as must the five courses from the Economics Department, with grades of C– or better in Economics 101 and 102.

It is strongly recommended that students take Mathematics 115A as one of their first upper division courses for the major.

Honors Program

Students who wish to graduate with departmental honors should apply for admission to the honors program in the Mathematics Department Student Services Office. They may apply any time after completing the preparation for the major courses and meeting the following requirements: (1) officially enrolled in the Mathematics/Economics major, (2) complete all the preparation for the major courses, (3) achieve a minimum 3.5 grade-point average in the mathematics preparation for the major courses, (4) achieve a minimum 3.5 grade-point average in the economics preparation for the major courses, and (5) achieve a minimum 3.5 grade-point average in both the upper division economics and mathematics courses. Highest honors are awarded at the discretion of the departmental honors committee based on grade-point average and quality of the senior thesis.

Computing Specialization

Students may select a specialization in Computing by (1) satisfying all the requirements for a bachelor’s degree in the major and (2) completing Mathematics 61 or 180, Program in Computing 10A, 10B, two courses from 10C, 15, 20A, 20B, 30, 40A, 60, and at least two courses from Mathematics 149 through 159, with a minimum grade of C– in each course and a combined grade-point average of at least 2.0. Students must petition for admission to the program and are advised to do so after they complete Program in Computing 10B (petitions should be filed in the Mathematics Department Student Services Office). Students graduate with a bachelor’s degree in mathematics/economics and a specialization in Computing.

MECHANICAL AND AEROSPACE ENGINEERING

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Yong Chen, Ph.D.

Russel E. Caflisch, Ph.D.

Robert F. Brown, Ph. D. (Mathematics)

Russell E. Caflisch, Ph.D. (Management, Mathematics, Materials Science and Engineering)

Peter Petersen, Ph.D. (Mathematics)

Marek G. Pycia, Ph.D. (Economics)

John G. Riley, Ph.D. (Economics)
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, nanomechanical and microelectromechanical systems, structural and solid mechanics, and systems 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 programs are accredited by the Engineering Accreditation Commission of ABET. See http://www.abet.org.

Mechanical Engineering B.S.

The 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, 157, 162A, 171A, 182A, 183; two departmental breadth courses (Electrical Engineering 100 and Materials Science and Engineering 104) — or one or both of these courses are taken as part of the technical breadth requirement; students must select a replacement upper division course or courses from the department — except for Mechanical and Aerospace Engineering 156A — or, by petition, from outside the department); three technical breadth courses (12 units) selected from an approved list available in the Office of Academic and Student Affairs; two capstone design courses (Mechanical and Aerospace Engineering 154A, 154B); and two major field elective courses (8 units) from Mechanical and Aerospace Engineering 105D, 131A, 131AL, C132A, 133A, 133AL, 134, 135, 136, CM140, 150C, C150G, 150R (unless taken as a required course), 153A, 155, 161A (unless taken as a required course), 161B, 161C, 161D, 162A, 163A, 166C, M168, 169A, 1715, 172, 175A, CM175A, CM180, 181A, 182B, 182C, 183, 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://grad.ucla.edu/gasaa. 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

15. Technical Communication for Engineers. (2)
Lecture, two hours; outside study, four hours. Requisite: English Composition 3. Understanding writing process. Determining the purpose, prewriting, principles of organizing technical information. Eliminating unnecessary words, structuring paragraphs clearly, structuring effective sentences. Writing abstracts, introductions, and conclusions. Drafting and revising coherent documents. Writing collaboratively. Letter grading.

94. Introduction to Computer-Aided Design and Drafting. (4)
Lecture, two hours; laboratory, four hours. Fundamentals of computer graphics and two- and three-dimensional modeling on computer-aided design and drafting systems. Students use one or more online computer systems to design and display various objects. Letter grading.

Upper Division Courses

101. Statics and Strength of Materials. (4)
Lecture, four hours; discussion, two hours; outside study, six hours. Requisites: Mathematics 31A, 31B, Physics 1A. Review of vector representation of forces, resultant force and moment, equilibrium of concurrent and nonconcurrent forces. Determine and indeterminate force systems. Area moments and products of inertia. Cauchy’s stress and linear strain components in solids, equilibrium of concurrent and nonconcurrent force systems. Hooke’s law for isotropic solids. Saint Venant’s problems of extension, bending, flexure, and torsion. Deflection of symmetric beams. Axial and hoop stresses in thick-walled pressure vessels.

102. Dynamics of Particles and Rigid Bodies. (4)
Lecture, four hours; discussion, two hours; outside study, six hours. Requisites: course 101 (enforced), Mathematics 33A, Physics 1A. Fundamental concepts of Newtonian mechanics. Kinematics and kinetics of particles and rigid bodies in two and three dimensions. Impulse-momentum and work-energy relationships. Applications. Letter grading.

103. Elementary Fluid Mechanics. (4)
Lecture, four hours; discussion, two hours; outside study, six hours. Requisites: Mathematics 32B, 33A, Physics 1B. Introduction to fluid mechanics: application of principles of mechanics to flow of compressible and incompressible fluids. Letter grading.

105A. Introduction to Engineering Thermodynamics. (4)
Lecture, four hours; discussion, two hours; outside study, six hours. Requisites: course 103, 105A. Mathematics 32B, 33B. Experimental thermodynamics. Concepts of equilibrium, temperature, and reversibility. First law and concept of energy; second law and concept of entropy. Equations of state and thermodynamic properties. Engineering applications of these principles in analysis and design of closed and open systems. Letter grading.

105D. Transport Phenomena. (4)
Lecture, four hours; discussion, two hours; outside study, six hours. Requisites: courses 103, 105A, Mathematics 32B, 33B. Transport phenomena: heat conduction, mass species diffusion, convective heat and mass transfer, and radiative transfer. Application in thermal and environmental control. Letter grading.

107. Introduction to Modeling and Analysis of Dynamic Systems. (4)
Lecture, four hours; discussion, one hour; laboratory, outside study. Five hours. Requisites: Computer Science 31, Electrical Engineering 100 (enforced). Introduction to modeling of physical systems, with examples of mechanical, fluid, thermal, and electric systems. Description of these systems with coverage of impulse response, convolution, frequency response, first- and second-order system transient response analysis, and numerical solution. Nonlinear differential equations, bifurcations with discussion of equilibrium solutions, small signal linearization, large signal response. Block diagram representation and response of interconnections of systems. Letter grading.

131A. Heat Transfer. (4)

131L. Thermodynamics and Heat Transfer Laboratory. (4)
Lecture, eight hours; outside study, four hours. Requisites: courses 131A, and 157 or 157S. Experimental study of physical phenomena and engineering systems using 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.

132A. Mass Transport. (4)

133A. Engineering Thermodynamics. (4)
Lecture, four hours; discussion, two hours; outside study, six hours. Requisites: courses 103, 105A. Applications of thermodynamic principles to engineering processes. Energy conversion: Rankine cycle and other cycles, refrigeration, psychrometry, reactive and nonreactive fluid flow systems. Letter grading.

133AL. Power Conversion Thermodynamics Laboratory. (4)
Lecture, eight hours; outside study, four hours. Review of Carnot cycle and other cycles, refrigeration, psychrometry, reactive and nonreactive fluid flow systems. Letter grading.

150A. Intermediate Fluid Mechanics. (4)
Lecture, four hours; discussion, one hour; outside study, seven hours. Requisites: courses 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 C113A. Letter grading.

150D. Fluid Dynamics of Biological Systems. (4)
Lecture, four hours; outside study, eight hours. Requisite: course 103. Mechanics of aquatic locomotion; insect and bird flight aerodynamics; pulsatile flow in circulatory system; physiology of blood; transport in m
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crocirculation; role of fluid dynamics in arterial diseases. Concurrently scheduled with course C250G. Letter grading.

C150P. Aircraft Propulsion Systems. (4) (Formerly numbered 150P) Lecture, four hours; discussion, two hours; outside study, six hours. Requisites: courses 150A, 150A. Thermodynamic properties of gases, aircraft engines, materials and components, performance, component matching, advanced aircraft engine topics. Concurrently scheduled with course C250P. Letter grading.

150R. Rocket Propulsion Systems. (4) Lecture, four hours; discussion, two hours; outside study, seven hours. Requisites: courses 103, 105A. Not open to students with credit for both courses 161B and 161R. Rocket propulsion concepts, including chemical rockets (liquid, gas, propellants), hydrogen-oxygen engines, electric (ion, plasma) rockets, nuclear rockets, and solar-powered vehicles. Current issues in launch vehicle technologies. Letter grading.

153A. Engineering Acoustics. (4) Lecture, four hours; discussion, two hours; outside study, six hours. Designed for junior/senior engineering majors. Fundamental course in acoustics; propagation of sound; sources of sound. Design of field measurement systems and instrumentation. Letter and grade design aspects. Letter grading.


154S. Flight Mechanics, Stability, and Control of Aircraft. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Requisites: courses 150A, 150B. Aircraft performance, flight mechanics, stability, and control design. Design for flight stability and control aspects. Letter grading.


155. Intermediate Dynamics. (4) Lecture, four hours; discussion, two hours; outside study, six hours. Requisite: course 102. Axioms of Newtonian mechanics, generalized coordinates, Lagrange equation, variational principles; central force motion; kinematics and dynamics of rigid bodies, plane motion of rotating bodies, oscillatory motion, normal coordinates, orthogonality relations. Letter grading.

156A. Advanced Strength of Materials. (4) Lecture, four hours; discussion, two hours; outside study, six hours. Enforced requisites: course 101, 182A. Not open to students with credit for course 166A. Concepts of stress, strain, and material behavior. Stresses in loaded beams with symmetric and asymmetric cross sections. Torsion of cylinders and thin-walled structures, shear flow. Stresses in pressure vessels, press-fit and shrink-fit problems, rotating shafts. Curve 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. Enforced requisites: courses 101, 102, 103, 105A, 105D, Electrical Engineering 141. Methods of measurement of basic quantities and performance of basic experiments in heat transfer, fluid mechanics, structures, and thermodynamics. Primary sensors, transducers, recording equipment, signal conditioning, data analysis. Letter grading.

157A. Fluid Mechanics and Aerodynamics Laboratory. (4) Laboratory, eight hours; outside study, four hours. Requisites: courses 150A, 150B, and 157 or 157S. Experimental illustration of important physical phenomena in area of fluid mechanics/aerodynamics, as well as hands-on experience with design of experimental apparatus, use of modern experimental tools and techniques in field. Letter grading.

157S. Basic Aerospace Engineering Laboratory. (4) Lecture, four hours; discussion, two hours; outside study, six hours. Enforced requisites: courses 101, 102, 103, 105A, Electrical Engineering 141. Recommended: course 15. Measurements of basic physical quantities in fluid mechanics, thermodynamics, and structures. Operation of primary transducers, computer-aided data acquisition, signal processing, and data analysis. Performance of experiments to enhance understanding of basic physical principles and characteristics of structures/systems of relevance to aerospace engineering. Letter grading.

161A. Introduction to Aeronautics. (4) Lecture, four hours; discussion, two hours; outside study, six hours. Recommended course 102. Recommended: course 182A. Space environment of Earth, trajectories and orbits, space rockets and staging, two-body problem, orbital transfer and rendezvous, problem of three bodies, elementary perturbation theory, influence of Earth's oblateness. Letter grading.

161B. Introduction to Space Propulsion. (4) Lecture, four hours; discussion, two hours; outside study, six hours. Recommended preparation: courses 102, 150P, 161A. Not open to students with credit for both courses 150R and 161R. Propulsion requirements for typical missions, propulsion chemistry of propellants, internal ballistics, regenerative cooling, liquid propellant feed systems, POGO instability. Electric propulsion. Multistage rockets, separation dynamics. Satellite and missile structure, launch vehicles, vibration isolation devices, vibration control of spacecraft. Letter grading.

161C. Spacecraft Design. (4) Lecture, four hours; outside study, eight hours. Enforced requisite: course 161B. Coverage of preliminary design by students of a small spacecraft carrying lightweight scientific payload with modest requirements for electric power, lifetime, and attitude stability. Students work in groups of three or four, with each student responsible primarily for one subsystem and for integration with the whole. Letter grading.

161D. Space Technology Hardware Design. (4) Lecture, two hours; laboratory, three hours; outside study, seven hours. Recommended requisite or corequisite: course 161B. Design, by students, of hardware with applications to space technology. Designs are then built by HSSEAS professional machine shop and tested by students. New project carried out each year. Letter grading.


162D. Mechanical Engineering Design I. (4) Lecture, two hours; laboratory, four hours; outside study, six hours. Enforced requisites: courses 94, 131A (or 133A), 156A (or 183), 162A (or 171A). Limited to seniors. First of two mechanical engineering capstone design courses. Letter grade only or course project management, design of thermal systems, mechatronics, mechanical systems, and mechanical components. Students work in teams to begin their two-term design project. Letter grading.

162E. Mechanical Engineering Design II. (4) Lecture, two hours; laboratory, four hours; outside study, six hours. Enforced requisite: course 162D. Limited to seniors. Second of two mechanical engineering capstone design courses. Students work in teams to complete their two-term design project started in course 162D, including the use of CAD design laboratory, CAD analysis, mechatronics, and conceptual design for team project. Letter grading.

166A. Analysis of Flight Structures. (4) Lecture, four hours; discussion, two hours; outside study, six hours. Requisites: courses 101, 182A. Not open to students with credit for course 166A. Introduction to the convergence properties, isoparametric formulation, yield and fatigue; bending of beams; torsion of beams; warping; torsion of thin-walled crossed sections; shear flow, shear-lag; combined bending torsion of thin-walled, stiffened structural members of aerospace vehicles; elements of plate theory; buckling of columns. Letter grading.

166C. Design of Composite Structures. (4) Lecture, four hours; discussion, two hours; outside study, six hours. Enforced 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) Lecture, three hours; laboratory, two hours; outside study, seven hours. Enforced requisite: course 171A. Introduction to loop shaping controller design with application to laboratory electromechanical systems. Power spectrum models of noise and disturbances, and performance trade-offs imposed by conflicting requirements of sensitivity and complementary sensitivity function imposed by minimum phase plants. Lecture topics supported by weekly homework. Letter grading.

174. Probability and Its Applications to Risk, Reliability, and Quality Control. (4) Lecture, four hours; discussion, two hours; outside study, six hours. Requisite: Mathematics 33A. Introduction to probability theory; random variables, functions of random variables, models of failure of components, reliability, redundancy, complex systems, stress-strength models, fault tree analysis, statistical quality control by variables and 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 processes and sequences, expectation, conditional expectation, Gaussian/Markov processes, 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 Bioengineering CM160 and Electrical Engineering CM150L) Lecture, four hours; discussion, one hour; outside study, seven hours. Requisites: Chemistry 20A, 20L, Physics 1A, 1B, 4AL, 4BL. 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 design and fabrication processes capable of achieving desired MEMS device. Concurrently scheduled with course CM280A. Letter grading.

CM180L. Introduction to Micromachining and Microelectromechanical Systems (MEMS) Laboratory. (2) (Same as Bioengineering CM150L and Electrical Engineering CM150L) Lecture, one hour; laboratory, four hours; outside study, one hour. Requisites: course CM180, Physics 20L, 20A, 1A, 1B, 4AL, 4BL. Hands-on introduction to micromachining technologies and microelectromechanical systems (MEMS) laboratory. Methods of micromachining and associated processes can be used to design and fabricate 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.


182C. Numerical Methods for Engineering Applications. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Requisites: course 182A, Concurrently scheduled with course ENGR 103. Basic topics from numerical analysis having wide application in solution of practical engineering problems, computer arithmetic, and errors. Solution of linear and nonlinear systems. Algebraic equations of one variable, non-linear systems. Least-square methods, numerical quadrature, and finite difference approximations. Numerical solution of initial and boundary value problems for ordinary differential equations. Letter grading.


184. Introduction to Geometry Modeling. (4) Lecture, four hours; laboratory, four hours; outside study, four hours. Requisite: Computer Science 31. Fundamentals in parametric curve and surface modeling, parametric spaces, blending functions, conics, splines and Bezier curve, coordinate transforms, algebraic and geometric form of surfaces, analytical surface and solid modeling, analysis and design experience with CAD/CAM systems design and implementation. Letter grading.

185. Introduction to Radio Frequency Identification and its Application in Manufacturing Supply Chain. (4) Lecture, four hours; discussion, two hours; outside study, six hours. Enforced requisite: Computer Science 31. Manufacturing today requires assembly of individual parts into assembled products, shipping of such products, and eventually, use, maintenance, and recycling of such products. Radio frequency identification (RFID) chips installed on components, subassemblies, and assemblies of products allow them to be tracked automatically as they move and transform through manufacturing supply chain. RFID tags have memory and small CPU that store information about product status to be written, stored, and transmitted wirelessly. Tag data can then be forwarded by reader to enterprise software by way of RFID middleware layer. Study of how RFID is used with focus on automotive and aerospace. Letter grading.


C187L. Nanoscale Fabrication, Characterization, and Biodetection Laboratory. (4) Lecture, two hours; laboratory, two hours; outside study, eight hours. Multidisciplinary course that introduces laboratory techniques of nanoscale fabrication, characterization, and biodetection. Basic physical, chemical, and biological principles related to these techniques, top-down and bottom-up (self-assembly) nanofabrication, nanocharacterization (AFM, SEM, etc.), and optical and electrochemical biosensors. Students engage in hands-on experimentation, 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. Concurrently scheduled with course 182A. Topics in mechanical and aerospace engineering for under-graduate students taught on experimental or temporary basis, such as those taught by resident and visiting faculty members. May be repeated for credit with topic or instructor change. P/NP or letter grading.

194. Research Group Seminars: Mechanical and Aerospace Engineering. (2 to 4) Seminar, two hours; outside study, four to eight hours. Recommended for undergraduate students taught on experimental or temporary basis, such as those taught by resident and visiting faculty members. May be repeated for credit with topic or instructor change. P/NP or letter grading.

199. Directed Research in Mechanical and Aerospace Engineering. (2 to 8) 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 with school approval. Individual contract required; enrollment petitions available in Office of Academic and Student Affairs. Letter grading.

Graduate Courses


231B. Radiation Heat Transfer. (4) Lecture, four hours; outside study, eight hours. Enforced requisite: course 105D. Radiative properties of materials and radiative energy transfer. Emphasis on fundamental concepts, including energy levels and electromagnetic waves as well as analytical methods for calculating radiative properties and radiation transfer in absorbing, emitting, and scattering media. Applications cover laser-material interactions in addition to traditional areas such as combustion and thermal insulation. Letter grading.


231G. Microscopic Energy Transport. (4) Lecture, four hours; outside study, eight hours. Enforced requisite: course 105D. Heat carriers (photons, electronics, phonons, molecules) and their energy characteristics, statistical properties of heat carriers, scattering and propagation of heat carriers, Boltzmann transport equations, derivation of classical laws from Boltzmann transport equations, deviation from classical laws at small scale. Letter grading.


235A. Nuclear Reactor Theory. (4) Lecture, four hours; outside study, eight hours. Enforced requisite: course 182A. Underlying physics and mathematics of nuclear...


239B. Seminar: Current Topics in Transport Phenomena. (2 to 4) Seminar, two to four hours; outside study, four to eight hours. Designed for graduate mechanical and aerospace engineering students. Lectures, discussions, student presentations, and projects in areas of current interest in transport phenomena. May be repeated for credit. S/U grading.

239F. Special Topics in Transport Phenomena. (2 to 4) Lecture, two to four hours; outside study, four to eight hours. Designed for graduate mechanical and aerospace engineering students. Advanced and current study of one or more aspects of heat and mass transfer, such as turbulence, stability and transition, buoyancy effects, variational methods, and measurement techniques. May be repeated for credit with topic change. S/U 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.

CM240. Introduction to Biomechanics. (4) (Same as Bioengineering CM240.) Lecture, four hours; discussion, two hours; outside study, six hours. Requisites: courses 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. Lecture, Power generator, laboratory simulations and tests. Concurrently scheduled with course CM140. Letter grading.

250A. Foundations of Fluid Dynamics. (4) Lecture, four hours; outside study, eight hours. Requisite: course 150A. Fundamental principles of fluid dynamics applied to study of fluid resistance. States of fluid motion discussed in order of advancing Reynolds numbers: wake, boundary layers, instability, transition, turbulence, and vortex generation, and flow separation. Letter grading.


250E. Spectral Methods in Fluid Dynamics. (4) Lecture, four hours; outside study, eight hours. Requisites: courses 182A, 182B, 182C, 250A, 250B. Introduction to basic concepts and techniques of various spectral methods applied to solving partial differential equations. Particular emphasis on techniques of solving unsteady three-dimensional Navier/Stokes equations. Topics include spectral representation of functions, discrete Fourier transform, etc. Letter grading.

250F. Special Topics in Fluid Dynamics. (4) Lecture, four hours; outside study, eight hours. Recommended requisite: course 250C. Molecular and chemical description of equilibrium and nonequilibrium fluid flows; chemical flows, chemical thermodynamics and statistical thermodynamics for calculation gas properties, equilibriuim flows of real gases, vibrational and chemical rate processes, Rayleigh flows, chemical thermodynamics and statistical thermodynamics for calculation gas properties, equilibriuim flows of real gases, and computational fluid dynamics methods for nonequilibrium hypersonic flows. Letter grading.

250G. Fluid Dynamics of Biological Systems. (4) Lecture, four hours; outside study, eight hours. Requisite: course 250F. Introduction to Navier-Stokes fluids, lubrication, insect and bird flight aerodynamics; pulsatlie flow in circulatory system; rheology of blood; transport in microcirculation; role of fluid dynamics in arterial diseases. Concurrently scheduled with course C150G. Letter grading.


252A. Stability of Fluid Motion. (4) Lecture, four hours; outside study, eight hours. Requisite: course 150A. Mechanisms by which laminar flows can become unstable, including secondary motions. Linear stability theory; thermal, centrifugal, and shear instabilities; boundary layer instability. Non-linear aspects: sufficient criteria for stability, subcritical instabilities, supercritical states, transition to turbulence. Letter grading.

252B. Turbulence. (4) Lecture, four hours; outside study, eight hours. Requisites: courses 250A, 250B. Characteristics of turbulent flows, conservation and transport equations, turbulence and the description of turbulent flows, scales of turbulent motion, simple turbulent flows, free-shear flows, wall-bounded flows, turbulence modeling, numerical simulations of turbulent flows, and turbulence control. Letter grading.


252D. Combustion Rate Processes. (4) Lecture, four hours; outside study, eight hours. Requisite: course 252C. Basic concepts in chemical kinetics: molecular collisions, distribution functions and averaging, thermal and statistical methods for calculation, reaction rate theories. Practical examples of large-scale chain mecha- nisms from combustion chemistry of several ele- ments, etc. 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; process and nutation of spinning bodies. Letter grading.

255B. Mathematical Methods in Dynamics. (4) Lecture, four hours; outside study, eight hours. Requisite: course 250B. Partial differential equations, first- and second-order methods, parabolic, hyperbolic, and elliptic equations, separation of variables, orthogonal expansions, Green's function, and variational interpretation; stability determination by simulation, linearization, and Lyapunov direct method; the Hamilton- tonian as a Lyapunov function; nonautonomous sys- tems and time-dependent solutions. One or two of nonlinear analysis: parametric excitation and nonlinear resonance. Application to mechanical systems. Letter grading.

256A. 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; equilibriuim equations; linear elastic medium; plane elas- tostatic problems, holes, corners, inclusions, cracks; three-dimensional problems of Kelvin, Boussinesq, and Cerruti. Introduction to boundary integral equa- tion method. Letter grading.

256B. Nonlinear Elasticity. (4) (Same as Civil Engi- neering M230B.) Lecture, four hours; outside study, eight hours. Requisite: course M256A. Kinematics of deformation, material and spatial coordinates, defor- mation gradient tensor, nonlinear behavior of linear tens- tors, strain displacement relations; balance laws, Cauchy and Piola stresses, Cauchy equations of motion, Cauchy equations of equilibrium, linear and nonlinear elastic behavior, deviations, elasticity, hyperelasticity, thermoelasticity; linearization of field equations; solution of selected problems. Letter grading.


256F. Analytical Fracture Mechanics. (4) Lecture, four hours; outside study, eight hours. Requisite: course M256A. Review of modern fracture mechanics, elementary stress analyses; analytical and numerical methods for calculation of crack tip stress intensi- ty factors; engineering applications in stiffened struc- tures, pressure vessels, plates, and shells. Letter grading.

258A. Nanomechanics and Micromechanics. (4) Lecture, four hours; outside study, eight hours. Recommended requisite: course 166A or 166B. Constitutive relations for electro-magneto-mechanical materials. Fiber-optic sensor technology. Micro/macro analysis, including classical lamination theory, shear lag theory, composite layer analysis, hexagonal models, and homogenization techniques as they apply to active materials. Active systems design, inch-worm, and bi-morph. Letter grading.

263B. Spacecraft Dynamics. (4) Lecture, four hours; outside study, eight hours. Recommended requisite: course 255A. Recommended: course 255B. Modeling, dynamics, and stability of spacecraft; spinning and dual-axis spacecraft dynamics; spinup through resonance, spinning rocket dynamics; environmental torques in space, modeling and model reduction of flexible space structures. Letter grading.

263C. Mechanics and Trajectory Planning of Industrial Robots. (4) Lecture, four hours; outside study, eight hours. Required course: course 163A. Theory and implementation of industrial robots. Design considerations, Kinematic structure modeling, trajectory planning, and system dynamics. Differential motion and static forces. Individual student project studies. Letter grading.

263D. Advanced Robotics. (4) Lecture, four hours; outside study, eight hours. Recommended preparation: course 163A. Prerequisites for nonlinear control, robotic analysis and modeling techniques for nonlinear systems leading to term paper or oral presentation (possible help from guest lecturers). Letter grading.

259A. Seminar: Advanced Topics in Fluid Mechanics. (4) Seminar, four hours; outside study, eight hours. Advanced study in various fields of solid mechanics. Topics include dynamics, elasticity, plasticity, and stability of solids. Letter grading.

260. Current Topics in Mechanical Engineering. (2 to 4) Seminar, two to four hours; outside study, four to eight hours. Designed for graduate mechanical and aerospace engineering students. Lectures, discussions, and student presentations and projects in areas of current interest to the field. May be repeated for credit. S/U grading.


262. Mechanics of Intelligent Material Systems. (4) Lecture, four hours; outside study, eight hours. Recommended prerequisite: course 166C. Constitutive relations for electro-magneto-mechanical materials. Fiber-optic sensor technology. Micro/macro analysis, including classical lamination theory, shear lag theory, composite layer analysis, hexagonal models, and homogenization techniques as they apply to active materials. Active systems design, inch-worm, and bi-morph. Letter grading.

263A. Analytical Foundations of Motion Controllers. (4) Lecture, four hours; outside study, eight hours. Recommended requisite: courses 163A, 294. Theory of motion control for modern computer-controlled machines; multiaxis computer-controlled machines; multiaxis controllers, controllers, disk controllers, and motion coordination; coordinated motion with desired speed and acceleration; jerk analysis; motion command generation; theory and design of controller in- terpolators; motion trajectory design and analysis; ge- ometry-speed-sampling-time relationships. Letter grading.

271A. Probability and Stochastic Processes in Dynamic Systems. (4) Formerly numbered 271A) Lecture, four hours; outside study, eight hours. En- forced requisites: courses 107, 182. Probability spaces, random variables, measure, expectation, conditional expectation, Gaussian/Markov sequences, and minimum variance es- timator (Kalman filter) with applications. Concurrently scheduled with course C175A. Letter grading.

271B. Stochastic Estimation. (4) Lecture, four hours; outside study, eight hours. Enforced requisite: course C271A. Linear and nonlinear estimation theo- ry, orthogonal projection lemma, Bayesian filtering theory, approximate mean and risk estimators. Letter grading.


271D. Seminar: Special Topics in Dynamic Sys- tems Control. (4) Seminar, four hours; outside study, eight hours. Seminar on current research topics in dy- namic systems modeling, control, and applications. Topics selected from process control, differential games, nonlinear estimation, adaptive filtering, indus- trial and aerospace applications, etc. Letter grading.

M272A. Nonlinear Dynamic Systems. (4) Same as Chemical Engineering M272A and Electrical Engineering M272A) Lecture, four hours; outside study, eight hours. Course 270A or Electrical Engineering M270A or Electrical Engineering M270A. Stress-strain relations, control of nonlinear systems: time-invariant and time-varying nonlinear dynamic systems with emphasis on stability. Lyapunov theory (including converse theorems), invariance, center manifold theorem, input-to-state stability and small- gain theorem. Letter grading.


275A. System Identification. (4) Lecture, four hours; outside study, eight hours. Required study: eight hours. Survey of the identification of dynamical systems from input/output data, with emphasis on identification of discrete-time (digital) models of sampled-data systems. Coverage of con- version to continuous-time models. Models identified include transfer functions and state-space models. Discussion of applications in mechanical and aero- space engineering, including identification of flexible structures, microelectromechanical systems (MEMS) devices, and acoustic ducts. Letter grading.

M276. Dynamic Programming. (4) Same as Electrical Engineering M276) Lecture, four hours; outside study, eight hours. Recommended requisite: Electrical Engineering 232A or 236A or 236B. Introduction to mathematical analysis of sequential decision pro- cesses. Finite horizon model in both deterministic and stochastic cases. Finite-state infinite horizon model. Markov decision process. Examining the structure of the Bellman equation (dynamic programming) to optimal control of dynamic systems modeled by nonlinear or- dinary differential equations. Letter grading.

C271A. Probability and Stochastic Processes in Dynamic Systems. (4) Formerly numbered 271A) Lecture, four hours; outside study, eight hours. En- forced requisites: courses 107, 182. Probability spaces, random variables, measure, expectation, conditional expectation, Gaussian/Markov sequences, and minimum variance es- timator (Kalman filter) with applications. Concurrently scheduled with course C175A. Letter grading.

271B. Stochastic Estimation. (4) Lecture, four hours; outside study, eight hours. Enforced requisite: course C271A. Linear and nonlinear estimation theo- ry, orthogonal projection lemma, Bayesian filtering theory, approximate mean and risk estimators. Letter grading.


271D. Seminar: Special Topics in Dynamic Sys- tems Control. (4) Seminar, four hours; outside study, eight hours. Seminar on current research topics in dy- namic systems modeling, control, and applications. Topics selected from process control, differential games, nonlinear estimation, adaptive filtering, indus- trial and aerospace applications, etc. Letter grading.


275A. System Identification. (4) Lecture, four hours; outside study, eight hours. Required study: eight hours. Survey of the identification of dynamical systems from input/output data, with emphasis on identification of discrete-time (digital) models of sampled-data systems. Coverage of con- version to continuous-time models. Models identified include transfer functions and state-space models. Discussion of applications in mechanical and aero- space engineering, including identification of flexible structures, microelectromechanical systems (MEMS) devices, and acoustic ducts. Letter grading.

M276. Dynamic Programming. (4) Same as Electrical Engineering M276) Lecture, four hours; outside study, eight hours. Recommended requisite: Electrical Engineering 232A or 236A or 236B. Introduction to mathematical analysis of sequential decision pro- cesses. Finite horizon model in both deterministic and stochastic cases. Finite-state infinite horizon model. Markov decision process. Examining the structure of the Bellman equation (dynamic programming) to optimal control of dynamic systems modeled by nonlinear or- dinary differential equations. Letter grading.
lars, previewed optimal feedforward compensator, re-
petitive and learning control, and adaptive control. Real-
nucation of topics to selected mechatronic systems. Letter grading.

279. Dynamics and Control of Biological Oscilla-
tions. (4) Lecture, four hours; outside study, eight hours. Requi-
sites: courses 107, M270A. Analysis and design of biological systems. Topics include biological control systems that generate coordinated oscillations. Topics include neural information processing through action potentials (spike train), central pattern generator, coupled and uncoupled oscillators, optical (periodic motion) for animal locomotion, and entrainment to natural oscillations via feedback control. Letter grading.

CM250A. Introduction to Micromachining and Micro-
electromechanical Systems (MEMS). (4) (Same as Bioengineering CM250A and Electrical Engineering CM250A.) Lecture, four hours; discussion, one hour; outside study, seven hours. Requisites: Chemistry 20A, 20L, Physics 1A, 1B, 1C, 48L. Introduction to micromachining technologies and microelectromechanical systems (MEMS). Methods of micromachining and how these methods can be used to produce varied MEMS, including microstructures, microsensors, and microactuators. Students design microfabrication processes capable of achieving desired MEMS device. Concurrently scheduled with course CM180L. Letter grading.

M280B. Microelectromechanical Systems (MEMS) Fabrication. (4) (Same as Bioengineering M250B and Electrical Engineering M250B.) Lecture, three hours; discussion, one hour; outside study, eight hours. Requisite: course CM280A, Chemistry 20A, 20L, Physics 1A, 1B, 1C, 48L. Hands-on 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 go through process of fabricating MEMS device. Concurrently scheduled with course CM180L. Letter grading.

281. Microsiences. (4) Lecture, four hours; outside study, eight hours. Requisites: courses 131A, 150A. Basic science issues in micro domain. Topics include micro fluid science, microscale heat transfer, mechanical behavior of microstructures, as well as dynamics and control of micro devices. Letter grading.

M282. Microelectromechanical Systems (MEMS) Device Physics and Design. (4) (Same as Bioengineering M252 and Electrical Engineering M252.) Lecture, four hours; outside study, eight hours. Introduc-
tion to MEMS design. Design methods, design rules, sensors, actuators, materials, microsensors, and microactuators. Designing MEMS to be produced with both foundry and nonfoundry processes. Computer-aided design for MEMS. Design project require-
ment. Letter grading.

284. Sensors, Actuators, and Signal Processing. (4) Lecture, four hours; outside study, eight hours. Principles and performance of micro transducers. Application of using unique properties of micro transducers for control of real-time control of engi-
neering problems. Associated signal processing require-
ts for these applications. Letter grading.

285. Interface Phenomena. (4) Lecture, four hours; outside study, eight hours. Requisites: courses 103, 105A. Introduction to fundamental physical phenomena occurring at interfaces and application of their knowledge to engineering problems. Func-
damental concepts of interfacial phenomena, includ-
ing surface tension, surfactants, interfacial thermodynamics, interfacial tension, interfacial hydro-
dynamics, and dynamics of triple line. Presentation of various applications, including wetting, change of phase (boiling and condensation), forms and emul-
sions, microelectromechanical systems, and biologi-
cal systems. Letter grading.

C286. Applied Optics. (4) Lecture, four hours; dis-
cussion, two hours; outside study, six hours. Requi-
site: Physics 1C. Fundamental principles of optical systems, optical instruments. Interference, diff-
raction and interference. Fourier optics, beam optics. Propagation of light, Snell's law, and Huygen princi-
ple. Refraction and reflection. Plane waves, spherical waves, image formation. Total internal reflection. Polarization, polarizers, and wave-plates. Lenses and aberrations, lens laws and formation of images, resolu-
tion and primary aberrations. Simple optical instru-
ments, still cameras, shutters, apertures. Design of telescopes, microscope design, projection system design. Interference, Young's slit experiment and fringe visibility, Michelson interferometer, multiple-beam interference and thin film coatings. Diffraction theory, Fraunhofer and Fresnel diffraction, Fresnel zone plate. Fiber optics, waveguides and modes, fiber coupling, types of fiber: single and multimode. Con-
currently scheduled with course C287L. Letter grading.

M287. Nanoscience and Technology. (4) (Same as Electrical Engineering M257.) Lecture, four hours; out-
side study, eight hours. Enforced requisite: course CM280A. Introduction to fundamentals of nanoscale science and engineering, physical principles, quantum mechanics, chemical bonding and nano-
structures, top-down and bottom-up (self-assembled) nanofabrication; nanocharacterization; nanomaterials, nanoelectronics, and nanobiofabrication technology. Introduction to new knowledge and techniques in nano areas to understand scientific principles behind nanotechnology and inspire students to create new ideas in multiple fields. Letter grading.

C287L. Nanoscale Fabrication, Characterization, and Biodetection Laboratory. (4) Lecture, two hours; laboratory, two hours; outside study, eight hours. Multidisciplinary course that introduces labora-
tory techniques of nanoscale fabrication, characteri-
zation, and biodetection. Basic physical, chemical, and biological principles related to these techniques, top-down and bottom-up (self-assembled) nanofabri-
cation, nanocharacterization (AEM, SEM, etc.), and optical and electrochemical biosensors. Students en-
courage to create their own 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 Sci-
ence 104, Physics 17. Science and engineering of la-
sers and microfabrication. Device fabrication of advanced materials, including semiconductors, metals, and insulators. Top-
ics include fundamentals in laser interactions with advanced materials, transport issues (thermia, mass, chemical, carrier, etc.) in laser microfabrication, state-
of-art optics and instrumentation for laser microfabri-
cation, applications such as rapid prototyping, surface modifications (physical/chemical), microma-
chining through 2D/DUV (microelectro-
mechanical systems) and data storage, up-to-date research activities. Student term projects. Letter grading.

293. Quality Engineering in Design and Manufac-

298. Seminar: Engineering. (2 to 4) Seminar, to be arranged. Limited to graduate mechanical and aero-
space engineering students. Seminars may be orga-
nized in advanced technical fields. If appropriate, field trips may be arranged. May be repeated with topic change. Letter grading.

M299A. Seminar: Systems, Dynamics, and Control Top-
ics. (2) (Same as Chemical Engineering M297 and Electrical Engineering M248S.) Seminar, two hours; outside study, six hours. Limited to graduate engi-
neering students. Presentations of research topics by leading academic researchers from fields of systems, dynamics, and control. Students who work in these fields present their papers and results. S/U grading.

375. Teaching Apprentice Practicum. (1 to 4) Semi-
ar, to be arranged. Preparation: apprentice person-
nel employment as teaching assistant, associate, or fellow. Teaching apprentice under active guid-
ance and supervision of regular faculty member re-
ponsible for curriculum and instruction at UCLA. May be repeated for credit. S/U grading.

495. Teaching Assistant Training Seminar. (2) Sem-
ar, two hours; outside study, four hours. Prepara-
tion: experience as teaching assistant in depart-
ment. Seminar on communication of mechanical and aerospace engineering principles, concepts, and methods; teaching assistant preparation, organiza-
tion, and assessment of material, including use of vi-
sual aids; grading, advising, and rapport with stu-
dents. S/U grading.
MEDICINE
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Chairs
Alan M. Fogelman, M.D. (Castera Professor of Cardiology), Executive Chair
Jan H. Tillisch, M.D., Executive Vice Chair
Jose Escarce, M.D., Ph.D., Executive Vice Chair, Academic Affairs
Robert K. Oye, M.D., Executive Vice Chair, Clinical Services
Dennis J. Slamon, M.D. (Boyer Professor of Medical Oncology), Executive Vice Chair, Research

Scope and Objectives
The principal goal of the Department of Medicine is to educate students in the expert diagnosis and compassionate management of human illness. Building on the biochemical, physiological, and behavioral foundations of the preclinical experience, students are taught information acquisition through history taking, physical examination, and laboratory evaluation; information synthesis through achieving a differential diagnosis and evaluative plan; and medical decision making for continued evaluation and therapy. Students are encouraged and guided in developing a caring physician/patient relationship.

Instruction in the department is provided in all four years of medical school, with the third and fourth years constituting a continuum of clinical experience. Students become integrated into a ward team and have significant ambulatory care experiences. They apply and extend their clinical skills, medical knowledge, and judgment in the care of patients assigned to them under the immediate supervision of house officers and attending staff.

The department offers a broad range of advanced clinical clerkships in general and subspecialty ambulatory and hospital-based internal medicine at all the major affiliated centers.

For 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; 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 Public Health 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.

160C. Health Outreach and Education to At-Risk Populations. (4) Seminar, two hours; fieldwork, six to eight hours. Requisites: 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 investigation under guidance of faculty mentor. Culminating paper required. May be repeated for credit. Individual contract required. P/NP or letter grading.

Graduate Courses


M256. Interdisciplinary Response to Infectious Disease Emergencies. (4) (Same as Community Health Sciences M256, Nursing M298, and Oral Biology M256.) Lecture, three hours; discussion, one hour. Designed to instill in profession- al students ideas of common emergency health problems and coordinated response, with specific attention to bioterrorism. Examination of tools to help stu- dents 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) (Same as Biostatistics M260A-M260B.) Lecture, four hours. Preparation: preclinical preparation: M.D., Ph.D., or dental degree. Requisites: 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, pharmacokinetics. S/U or letter grading.

M260C. Methodology in Clinical Research III. (4) (Same as Biostatistics 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 Biostatistics M261.) Lecture, two hours; discussion, two hours. Preparation: completion of one basic course in protection of human research subjects through the Institutional Review Board (IRB) and related topics. S/U or letter grading.

M263. Clinical Pharmacology. (2) (Same as Biomedical 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 targetting, gene therapy, and genomics. Letter grading.

M270C. Advanced Modeling Methodology for Dynamic Biomedical Systems. (4) (Same as Bioengineering M296A and Computer Science M296A.) Lecture, four hours; outside study, eight hours. Requisite: Electrical Engineering 141 or 142 or Mathematics 111A or Mechanical and Aerospace Engineering 171A. Development of dynamic systems modeling methodology for physiological, biomedical, pharmacological, chemical, and related systems. Control systems, multicompartamental, and input/output models, linear and nonlinear. Emphasis on model applications, limitations, and relevance in biomedical sciences and other limited data environments. Problem solving in PC laboratory. Letter grading.

M270D. Optimal Parameter Estimation and Experimental Design for Biomedical Systems. (4) (Same as Bioengineering M296B, Biomedical Engineering M270, and Computer Science M296B.) Lecture, four hours; outside study, eight hours. Requisite: course M270C or Bioengineering CM286 or Biometrics 220. Estimation methodology 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 quantitative models, with special focus on optimal sampling schedule design for kinetic models. Exploration of PC software for model building and optimal experiment design via applications in physiology and pharmacology. Letter grading.

M290A-M290B. Child Abuse and Neglect. (2-2)

**Microbiology, Immunology, and Molecular Genetics**

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Irvin S.Y. Chen, Ph.D.

Genhong Cheng, Ph.D.

Asim Dasgupta, Ph.D.

James S. Economou, M.D., Ph.D.

Lawrence T. Feldman, Ph.D.

Robert P. Gunsalus, Ph.D.

David A. Haake, M.D., In Residence

Kent L. Hill, Ph.D.

Marcus Horwitz, M.D.

Patricia J. Johnson, Ph.D.

H. Ronald Kaback, M.D.

Donald B. Kohn, M.D.

Benhur Lee, M.D.

Aldons J. Luis, Ph.D.

Otoniel M. Martinez-Maza, Ph.D.

M. Carrie Miceli, Ph.D.

Jeffery F. Miller, Ph.D. (M. Philip Davis Professor of Microbiology and Immunology)

Jeffrey H. Miller, Ph.D.

Robert L. Modlin, M.D.

Sherie L. Morrison, Ph.D.

Manuel Penichet, M.D., Ph.D.

Wenyuan Shi, Ph.D.

Larry Simpson, Ph.D.

Stephen T. Smale, Ph.D.

Fuyuhiko Tanimoto, Ph.D.

Christel H. Uittenbogaart, M.D., In Residence

Bernadine J. Wisnieski, Ph.D.

Owen N. Witte, M.D. (President's Professor of Developmental Immunology)

Otto O. Yang, M.D.

Jerome H. Zuck, Ph.D.

Z. Hong Zhou, Ph.D.

**Professors Emeriti**

Benjamin Bonavida, Ph.D.

Frederick A. Eiserling, Ph.D.

Sydney M. Finegold, M.D.

C. Fred Fox, Ph.D.

Rafael J. Martinez, Ph.D.

James N. Miller, Ph.D.

Debi P. Nayak, B.V.Sc., Ph.D.

Dan S. Ray, Ph.D.

Karl O. Stetter, Ph.D.

Ronald H. Stevens, Ph.D.

Randolf Wall, Ph.D.

Felix O. Wettstein, Ph.D.

**Associate Professors**

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Peter J. Bradley, Ph.D.

Beth A. Lazazzera, Ph.D.

Hanna K.A. Mikkola, M.D., Ph.D.

Yi Xing, Ph.D.

**Assistant Professors**

David G. Brooks, Ph.D. (Johanna F. and Joseph H. Shaper Family Professor of Microbiology)

Elissa Hallen, Ph.D.

April D. Pyle, Ph.D.

Lii Yang, Ph.D.

**Adjunct Associate Professor**

Imke Schroeder, Ph.D.

**Scope and Objectives**

Microbiology at UCLA is a diverse science that includes bacteriology, virology, immunology, genetics, molecular biology, and the study of single cells. The science has its roots in the fundamental human needs of health, nutrition, and environmental control, and it provides opportunities for study in the basic biological fields of genetics and cellular and molecular biology.

Undergraduate students majoring in Microbiology, Immunology, and Molecular Genetics prepare for careers in biomedical research, medicine, dentistry, or other health professions, biotechnology and genetic engineering, industrial microbiology, agricultural or environmental sciences, public health, and law or bioethics, among others. The courses presented by the department lead to a Bachelor of Science degree and depend heavily on preparation in the biological sciences, chemistry, physics, and mathematics.

The graduate program emphasizes the areas of molecular genetics, cell biology, immunology, cell and virus structure and morphogenesis, animal virology, general bacteriology and physiology, host/parasite relationships, medical microbiology, microbial genetics, microbial pathogenesis, and recombinant DNA research. Students are prepared for creative research careers in all of these fields. The objective of the department is to provide breadth in microbiology, immunology, and molecular genetics at the undergraduate level and depth and training in independent study and research for graduate students.

**Undergraduate Study**

**Microbiology, Immunology, and Molecular Genetics B.S.**

Microbiology, Immunology, and Molecular Genetics Premajor

While students are completing the preparation courses for the major, they are classified as Microbiology, Immunology, and Molecular Genetics premajors.

**Preparation for the Major**

**Life Sciences Core Curriculum**

Required: 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, 4A, 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 lower 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/admTransferGuide.pdf 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**

Two plans are offered by the department:

**Plan I — Research Immersion Laboratory**

Required: (1) Three foundation courses: Chemistry and Biochemistry 153A, Microbiology, Immunology, and Molecular Genetics 101, 185A, (2) two courses from one of the following groups: (a) Microbiology, Immunology, and Molecular Genetics 103AL and 103BL or (b) 109AL and 109BL or (c) Molecular, Cell, and Developmental Biology 104AL and 104BL or (d) 187AL and 187BL. (3) three focus elective courses selected from Chemistry and Biochemistry 153L, Microbiology, Immunology, and Molecular Genetics 102, 105, 106, 107, 132, CM156, 158, 168, CM256, Molecular, Cell, and Developmental Biology 138, 165A, and (4) at least 12 units of general elective courses selected from Biostatistics 100A, Chemistry and Biochemistry 103, 110A, M117, 136, C140, 153B, 153C, 156, CM160A, C161A, 171, 172, C179, C181, Ecology and Evolutionary Biology 121, 135, 137, 162, Epidemiology 100, Human Genetics C144, Microbiology, Immunology, and Molecular Genetics CM122, C174, 191H, 198C, 199, Molecular, Cell, and Developmental Biology 100, 136, M140, C141,
Plan II — Advanced Independent Research

Required: (1) Three foundation courses: Chemistry and Biochemistry 11A, Biochemistry 13A, and Microbiology, Immunology, and Molecular Genetics 101, 105A, 168, or Molecular, Cell and Developmental Biology 198C, 199A, Biology 3A or 3B. Requisite: Mathematics 2B or 3A. Limited to nonmajors. Exceptional students may be admitted with permission of the Department. biology and involve use of bioinformatics tools and computational analysis software. Emphasis on reading and understanding scientific literature as well as improving critical thinking skills such as evaluating hypotheses or experimentally address scientific questions. Critical aspects of research process, including record keeping, ethics, laboratory safety and citability, mechanisms of scientific writing, and project responsibilities and ownership. Letter grading.

103BL. Advanced Research Analysis in Virology. (Formerly numbered 108BC.) Laboratory, six hours. Enforced requisite: course 101. Research-oriented laboratory experience designed to promote discovery of novel bacterial viruses (phages). Working in teams, students conduct research projects that incorporate techniques in microbiology, virology, and molecular biology and use of bioinformatics tools and computational analysis software. Emphasis on reading and understanding scientific literature as well as improving critical thinking skills such as evaluating hypotheses or experimentally address scientific questions. Critical aspects of research process, including record keeping, ethics, laboratory safety and citation, mechanisms of scientific writing, and project responsibilities and ownership. Letter grading.

103B. Advanced Research Analysis in Virology. (Formerly numbered 108BC.) Laboratory, six hours. Enforced requisite: course 101. Limited to Microbiology, Immunology, and Molecular Genetics and Molecular, Cell, and Developmental Biology majors. Design-oriented laboratory experience designed to promote discovery of novel bacterial viruses (phages). Working in teams, students conduct research projects that incorporate techniques in microbiology, virology, and molecular biology and use of bioinformatics tools and computational analysis software. Emphasis on reading and understanding scientific literature as well as improving critical thinking skills such as evaluating hypotheses or experimentally address scientific questions. Critical aspects of research process, including record keeping, ethics, laboratory safety and citation, mechanisms of scientific writing, and project responsibilities and ownership. Letter grading.

105. Biological Microscopy. (4) Lecture, three hours; laboratory, one and one half hours; lecture, eight hours. Requisites: Life Sciences 3, 4, 23L. Recommended requisite or corequisite: course 101. Course 103AL is enforced requisite to 103BL. Limited to Microbiology, Immunology, and Molecular Genetics and Molecular, Cell, and Developmental Biology majors. Majors are required to present their research projects at the annual symposium held in the spring. Letter grading.

106. Medical Microbiology for Nursing Students. (4) Lecture, three hours; discussion, one hour. Requisite: Mathematics 3B 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. Lecture grading.

107. Environmental Microbiology. (4) Lecture, three hours; seminar/laboratory, one hour. Requisite: Mathematics 3B or 31A. Investigation of environmental microbiology, with emphasis on use of single-celled organisms. Review of basic principles of microbiology as they apply to biotechnology and examination of wide variety of biotechnologies, such as production of microbial enzymes, production of microbial sources of renewable energy, production of microbial products in biotechnology, and production of microbial products in the environment. P/NP or letter grading.

108. Medical Microbiology. (4) Lecture, three hours; laboratory, 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. Lecture, 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. Lecture grading.

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, consolidation, retrieval, and factors affecting the development of memory systems and their role in human affairs. P/NP or letter grading.

6. Microbiology for Nonmajors. (4) Lecture, four hours. Not open for credit to students with credit for course 101. Designed for nonscience students; introduction to biology of microorganisms (bacteria, viruses, and eukaryotes), with emphasis on use of single-celled organisms. Review of basic principles of microbiology as they apply to biotechnology and examination of wide variety of biotechnology, such as production of microbial enzymes, production of microbial products in biotechnology, and production of microbial products in the environment. P/NP or letter grading.

7. Cell Biology. (4) Lecture, three hours; seminar/laboratory, one hour. Requisite: Mathematics 3A or 31A. Investigation of environmental microbiology, with emphasis on use of single-celled organisms. Review of basic principles of microbiology as they apply to biotechnology and examination of wide variety of biotechnology, such as production of microbial enzymes, production of microbial products in biotechnology, and production of microbial products in the environment. P/NP or letter grading.

8. Molecular Biology. (4) Lecture, four hours; discussion, one hour. Requisite: Mathematics 3B or 31A. Investigation of environmental microbiology, with emphasis on use of single-celled organisms. Review of basic principles of microbiology as they apply to biotechnology and examination of wide variety of biotechnology, such as production of microbial enzymes, production of microbial products in biotechnology, and production of microbial products in the environment. P/NP or letter grading.
109AL. Research Immersion Laboratory in Microbiology. (5) Lecture, three hours; laboratory, eight hours. Enforced requisite: Life Sciences 3, 4, 23L. Letter grading.

156. Human Genetics and Genomics. (4) (Same as Molecular, Cell, and Developmental Biology. CM156.) Lecture, three hours; discussion, two hours. Requisites: Life Sciences 3, 4. Application of genetic principles in human populations, comparative humanomics, family studies, positional cloning, Mendelian and common diseases, cancer genetics, animal models, cytogenetics, pharmacogenetics, population genetics, and genetic counseling. Lecture, with 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 CM156E. Letter grading.

158. Microbial Genomics. (4) Lecture, three hours; discussion, one hour. Requisites: course 101, Chemistry 153A. Evolution, biodiversity, and sequencing of genomes; bacterial and viral genomes; bioenergetics; gene knockouts; genomics of antibiotic resistance; proteomics. Guest lecturers from department and related departments who discuss key papers with focus on their areas of expertise. Letter grading.

168. Molecular Parasitology. (4) Lecture, three hours; discussion, two hours. Enforced corequisite: course CM156, Life Sciences 3, 4. Survey of parasitic protozoa not only as parasites that interact with host, but also as model systems for analysis of disease; biological phenomena such as gene regulation, molecular development, cell-cell interactions, molecular evolution, and novel biochemical pathways. Letter grading.

174. 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 C274. Letter grading.

180A. Scientific Analysis and Communication I. (2) Seminar, two hours. Enforced corequisite: course 196A. Students read and discuss scientific articles and give presentations, introducing research topics using relevant primary literature. Critical aspects of research process, including record keeping, ethics, laboratory safety and citizenry, mechanics of scientific writing, and project responsibilities and ownership. Letter grading.

180B. Scientific Analysis and Communication II. (2) Seminar, two hours. Enforced corequisite: course 196B. Students present scientific talks in which they discuss research topics, project goals, methodological approaches, results, and conclusions. How to write research papers as well as prepare and present scientific posters. Production of deliverables that demonstrate research achievement and creation of sense of pride for work accomplished as skilled researchers. Letter grading.

185A. Immunology. (5) Lecture, three hours; discussion, three hours. Requisites: Life Sciences 3, 4, 23L. Recommended requisite: course CM153A. 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 Courses in Microbiology, Immunology, and Molecular Genetics. (2) (Formerly numbered 188.) Seminar, four hours. Enforced requisites: Life Sciences 3, 4. Departmentally sponsored experimental or temporary courses, such as those taught by visiting faculty members. May be repeated for credit with topic change. Letter grading.

191H. Honors Research Seminars: Microbiology, Immunology, and Molecular Genetics. (2) Seminar, two hours. Enforced corequisite: course 196A or 198B or 198C. Limited to senior honors in microbiology, immunology, and molecular genetics honors program students. Discussion of current research; Departmental honors 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 developments associated. May be repeated for credit. Letter grading.

193A. Journal Club Seminars: Microbiology, Immunology, and Molecular Genetics. (1) Seminar, one hour. Limited to undergraduates. Discussion of readings selected from current literature in microbiology, immunology, and molecular genetics field. Letter grading.

193B. Journal Club Seminars: Microbiology, Immunology, and Molecular Genetics. (1) Seminar, one hour. Limited to undergraduate students who are part of research group in department faculty laboratory. Discussion of current and current literature in field or of research of faculty members or students. May be repeated for credit. P/NP grading.

194A. Research Group Seminars: UC LEADS and NIH/MARC. (2) Seminar, two hours. Limited to students in UC LEADS and NIH/MARC programs. Analysis, review, and critique of current papers in biomedicinal sciences disciplines, using skills necessary for effective oral communication and effective use of software such as PowerPoint for oral presentations. May be repeated for credit. Letter grading.

196A. Research Apprenticeship I in Microbiology, Immunology, and Molecular Genetics. (4) (Formerly numbered 198A.) Tutorial, 12 hours. Enforced requisites: Life Sciences 3, 4, 23L. A research apprenticeship course designed for undergraduate students who are interested in pursuing inquiry-based and hypothesis-driven research experience in laboratory of departmental faculty mentor. Guided research project to be undertaken in conjunction with course 180A, followed by continuation research course 180B. Technical aspects vary depending on specific laboratory; however, all students learn how to apply scientific method; propose hypothesis, identify experiments to address hypothesis, perform experiments, and analyze results. How to record information from experimental activities into laboratory notebooks and to write research proposals. Letter grading.

196B. Research Apprenticeship II in Microbiology, Immunology, and Molecular Genetics. (4) (Formerly numbered 198B.) Tutorial, 12 hours. Enforced requisites: Life Sciences 3, 4, 23L. A research apprenticeship course designed for undergraduate students who are interested in pursuing inquiry-based and hypothesis-driven research experience in laboratory of departmental faculty mentor. Guided research project to be undertaken in conjunction with course 180A, followed by continuation research course 180B. Technical aspects vary depending on specific laboratory; however, all students learn how to apply scientific method; propose hypothesis, identify experiments to address hypothesis, perform experiments, and analyze results. How to record information from experimental activities into laboratory notebooks and to write research proposals. Letter grading.

197. Individual Studies in Microbiology, Immunology, and Molecular Genetics. (2 to 4) Directed study, one to four hours. Limited to juniors/seniors. Individual intensive study, with scheduled meetings to be arranged be-


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. Emphasis on nature of the gene and control of gene expression. May be repeated for credit. S/U or letter grading.

244. Research for Ethics Seminar. (2) Seminar, two hours. Designed for students supported by UCLA Predoctoral Training Program in Genetic Mechanisms and required of all trainees in two of their three years of support. Examination of prominent cases of scientific fraud through analysis and formal discussion. Faculty and students from School of Law may be invited to participate. S/U grading.

250. Seminar: Microbial Metabolism. (2) Seminar, two hours. Discussion and student presentations of recent work in areas of genetic regulation and physiology of bacterial metabolism. S/U or letter grading.

256. Seminar: Microbiological Genetics and Genomics. (4) (Same as Molecular, Cell, and Developmental Biology CM526) Lecture, three hours; discussion, two hours. Requisites: Life Sciences 3, 4. Application of genetic principles in human populations, with emphasis on genomics, family studies, positional cloning, Mendelian and common diseases, cancer genetics, animal models, cytokinetics, pharmacogenetics, population genetics, and genetic counseling. Lectures and readings in literature, with focus on correct and current questions in fields of medical and human genetics and metabolomics appropriate to answer such questions. Concurrently scheduled with course CM156. Independent research project required of graduate students. Letter grading.

261. 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. 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 immunobiology, biology, and biochemistry of cancer, with emphasis on fundamental studies involving immune response to cancer cells, 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 Virology. (2) 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.

274. 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: 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 261. Presentation of student oral critiques and participation in discussions on assigned 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
See African and Middle Eastern Studies under International and Area Studies

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Harley I. Kornblum, M.D., Ph.D., in Residence
Paul A. Krogstad, M.D., Ph.D.
Raphael D. Levine, Ph.D.
Edythe D. London, Ph.D., in Residence
Jamshid Maddahi, M.D., Ph.D.

Molecular and Medical Pharmacology
Molecular and Medical Pharmacology

Upper Division Courses

M110A. Drugs: Mechanisms, Uses, and Misuse. (4) (Same as Molecular Toxicology M110A.) Lecture, four hours (seven weeks); discussion, four hours (three weeks). Requisites: Life Sciences 2, 3. Course M110A is requisite to 110B. Introduction to pharmacology and toxicology for undergraduate students, emphasizing drug development and mechanisms of action of drugs and toxic agents. Letter grading.

M110B. 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 (C2ST) students. Communication and collaboration skills, specifically in interdisciplinary research settings and introduction to research project design and proposal process. Students submit written C2ST proposal prior to and give oral presentations of proposal and of UCLA internship research projects. May be repeated for credit. Letter grading.

Graduate Courses

200. Introduction to Laboratory Research. (8) Laboratory, eight to 20 hours. Individual projects in laboratory research for beginning graduate students. At end of each term students submit to their supervisor reports covering research performed. Pharmacology graduate students must take this course three times during their first two years in residence. Letter grading.

203. Medical Pharmacology. (2) Lecture, zero to two hours; discussion, zero to two hours. Requisites: courses 211A, 211B. Series of lectures and case presentations designed to illustrate principles of pharmacology in a clinical context, and solution of practical therapeutics by reference to pharmacokinetics, mechanisms of action, and disposition of drugs. S/U or letter grading.

M205A. Introduction to Chemistry of Biology. (4) (Same as Chemistry CM205A) Lecture, three hours; discussion, one hour. Enforced requisites: Chemistry 153A with grade of C– or better. Introduction to chemical biology. Topics include computational chemical biology, utility of synthesis in biochemical research, peptidomimetics, designed reagents for cellular imaging, natural product biosynthesis, protein engineering and directed evolution, cell biology of metal ions, imaging metal ions in cells, metal-containing drugs. Letter grading.

M205B. Issues on Chemistry/Biology Interface. (2) (Same as Chemistry CM205B) Seminar, 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 pharmacology.

Scope and Objectives

The Department of Molecular and Medical Pharmacology provides an opportunity for gifted students to work with accomplished faculty members toward making novel discoveries in basic and clinical research. Departmental research interests span a broad range of studies by integrating biological, physical, engineering, and medical sciences to explore mechanisms of disease in biological systems from in silico through a single cell to the whole organism level, while encompassing patient studies. Faculty members strive to understand basic biological systems and disease states and, where appropriate, to use these observations to develop both new molecular diagnostic technologies and new molecular therapeutics.

With the department as home to the Crump Institute for Molecular Imaging and the Ahman Translational Imaging Division with its nuclear medicine and positron emission tomography (PET) imaging research and clinical service, students have access to both state-of-the-art science and technology and the opportunity to make a direct impact on patient care. In addition, the department is home to the Business of Science Center. This program provides education, experience, and industry mentorship to graduate students in the department and in other academic programs to prepare them for professional careers.

Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website, http://grad.ucla.edu/gasasa/libracy/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 Molecular and Medical Pharmacology offers Master of Science (M.S.) and Doctor of Philosophy (Ph.D.) degrees in Molecular and Medical Pharmacology but does not admit applicants who seek only an M.S. degree.

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 Specialty 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.
interaction between drugs and biological systems and of principal groups of drugs used in therapeutics. Particular attention is given to normal histology of tissues which are major targets of 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.


M241. Introduction to Toxicology. (4) Corequisite: course M248. Designed to give students information on transfer of genetic material into an individual. Disposition to provide a scientific basis for their rational use in medicine. S/U or letter grading.

M242. Seminar: Pharmacology. (2) Corequisite: course M248. Seminar speakers, with focus on scientific approach and rationale, experimental methods, novel and pioneering findings (past and present), relevant background information on speakers and their institute, and presentation style and communication strengths. Discussion on characteristics that define and shape leaders in given fields. Students host lunches with seminar speakers, lead discussions to deconstruct all aspects of seminar presentations, and submit write-ups for online Wiki-postings on seminar-specific scientific topics. S/U grading.


237. Research Frontiers in Cellular and Molecular Pharmacology. (6) Lecture, six hours; laboratory, five hours total. Detailed examination of principles of pharmacology and medical use of drugs action on animal, tissue, cellular, and molecular levels, with emphasis on receptors, receptor/effector coupling, neurotransmitters, cardiovascular pharmacology, autonomic and central nervous system pharmacology. Letter grading.


M248. Introduction to Biological Imaging. (4) Corequisite: course M248 and Biomedical Physics M248.) Lecture, three hours; laboratory, four hours; outside study, seven hours. Exploration of role of biological imaging and imaging and medicine, including imaging physics, instrumentation, image processing, and applications of imaging for range of modalities. Preparation: course M228. Letter grading.


M252A. Molecular Mechanisms of Human Diseases I. (4) Same as Molecular, Cellular, and Integrative Physiology M252A.) Lecture, four hours. Corequisite: course M252B. Fundamental concepts and methodologies in modern biology, with emphasis on implications and relevance to human disease. Specific scientific topics. S/U grading.

M252B. Molecular Mechanisms of Human Diseases II. (4) Same as Molecular, Cellular, and Integrative Physiology M252B.) 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. Further exploration of topics discussed in course 287, allowing students to interact with speakers and bring their individual concerns to table. Past and present students encouraged to enroll. S/U grading.

287. Business of Science: Exploring Entrepreneurship. (2) Lecture, two hours. 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, particular 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 strategies, 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.

289. Special Topics in Pharmacology. (4) Lecture, four hours. Examination in depth of topics of current importance in pharmacology. Emphasis on recent contributions of special interest to advanced Ph.D. candidates and faculty. Letter grading.

290. Research Projects, Proposals, and Presentations. (6) Lecture, four hours; discussion, four hours. Limited to departmental majors. Introduction to format and requirements of research proposals. Students can critically read primary papers and give formal scientific presentations, ask new questions, formulate new hypotheses, and construct research projects, understand balance of importance, novelty, and feasibility, and develop ability to think independently, creatively, and comprehensively. 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.

296. Seminar: Current Topics in Molecular and Medical Pharmacology. (2) Limited to pharmacology, ACCESS program, and interdepartmental Molecular Biology Ph.D. program students. Students conduct or participate in discussions on assigned topics. S/U or letter grading.

375. Teaching Apprentice Practicum. (1 to 4) Seminar, to be arranged. Preparation: apprentice personnel employment as teaching assistant, associate, 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.


ology; microbiology/virology and pathogenesis; molecular evolution and paleobiology; oncogenes and signal transduction; plant molecular biology; protein and enzyme structure and function; genomics; bioinformatics; and structural biology.

Graduate Study
Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website, http://grad.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 Biology Program offers the Doctor of Philosophy (Ph.D.) degree in Molecular Biology.

Molecular Biology
Graduate Courses
298. Current Topics in Molecular Biology. (2) Student presentation/seminar, two hours. Students present oral critiques and participate in discussions on assigned topics. S/U grading.

596. Directed Individual Studies. (2 to 12) Tutorial, to be arranged. Directed individual research or study. May be repeated for a maximum of 12 units. S/U grading.

599. Ph.D. Dissertation Research and Writing. (2 to 12) Tutorial, to be arranged. Directed individual research or study. May be repeated for a maximum of 12 units. S/U grading.

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 underlying recent technical advances in molecular, cell, and developmental biology of animals and plants. Areas of emphasis include cell biology, immunology, molecular biology, plant biology, developmental biology, and neurobiology, among others.

Preparation for the Major

Life Sciences Core Curriculum
Required: 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 104AL, 150AL, 187AL, 198B, 198C, 199B, 199C, or Microbiology, Immunology, and Molecular Genetics 103AL; one developmental biology course from Molecular, Cell, and Developmental Biology 138 or C141; one cell biology course from M140 or 165A; and one molecular biology course from 144 or 165B.

Electives: At least 20 upper division elective units, of which at least 10 must be in courses offered by the department. Any upper division departmental course, except Molecular, Cell, and Developmental Biology 100, 190A, 190B, 190C, 192A, 192B, 193, 194A, or 199, may be selected. The following courses outside the department may be taken to satisfy a maximum of 10 units in this category: Biostatistics 100A or Statistics 100A, Chemistry and Biochemistry 153C, 153L, 154, 156, 159A, C159B, C160A, Ecology and Evolutionary Biology 110, 121, 162, 162L, Human Genetics C144, Microbiology, Immunology, and Molecu-
At the discretion of the departmental honors committee, students who have (1) a GPA of 3.6 or better, both overall and in the major and (2) demonstrated exceptional accomplishment on the research thesis are awarded highest departmental honors.

Computing Specialization

Majors in Molecular, Cell, and Developmental Biology may select a specialization in Computing by (1) satisfying all the requirements for a bachelor's degree in the major, (2) completing Program in Computing 10A, 10B, 10C, 30, and 60, and (3) completing one course from Computer Science CM186 or Ecology and Evolutionary Biology C159. A grade of C– or better is required in each course, with a combined grade-point average in the specialization of at least 2.0. Students must petition for admission to the program and are advised to do so after completing Program in Computing 10B (petitions should be filed in the Student Affairs Office). Students graduate with a bachelor's degree in their major and a specialization in Computing.

Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website, http://grad.ucla.edu/gasaa.library/pgrmqrntro.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, Cell, and Developmental Biology offers Master of Arts (M.A.), Candidate in Philosophy (C.Phil.), and Doctor of Philosophy (Ph.D.) degrees in Molecular, Cell, and Developmental Biology.

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 of 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. (5) Lecture, four hours; discussion, one hour. Designed for nonmajors. Not open to students with credit for Honors Colloquium 70A or Life Sciences 3 or 4. Basic principles of genetic engineering. Overview of genetic engineering concepts and specific applications of genetic engineering to medicine, agriculture, law, and society. Emphasis on genetic engineering history and foundations to generate discussion on its use in society. P/NP or 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 degraded soils, and biological factories to produce biodegradable plastics, antibiotics, and other commodities. Underexploited agriculture crops also featured. P/NP or letter grading.

Upper Division Courses

100. Introduction to Cell Biology. (5) Lecture, three hours; discussion, two hours; required for Departmental Honors. P/NP or letter grading. Not open for credit to Molecular, Cell, and Developmental Biology majors or to students with credit for course M140 or 165A. Analysis of cell organization, structure, and function at molecular level. Cell membranes and organelles, membrane transport, cellular signaling, cytoskeleton and cell movement, intracellular trafficking, cell energetics. Letter grades.

104AL. Research Immersion Laboratory in Developmental Biology. (5) [Formerly numbered 104.] Lecture, two hours; laboratory, eight hours. Enforced prerequisites: Life Sciences 3, 4, 23L. Course 104AL is enforced prerequisite to 104AR. Not open for credit to Molecular, Cell, and Developmental Biology and Microbiology, Immunology, and Molecular Genetics majors. Discovery-based research using sea urchin as model system. Students determine expression of unstudied sea urchin genes using combination of molecular biology and computation techniques. May not be repeated for credit. Letter grading.

104BL. Advanced Research Analysis in Developmental Biology. (4) Laboratory, six hours. Enforced prerequisite: course 104AL. Limited to Molecular, Cell, and Developmental Biology and Microbiology, Immunology, and Molecular Genetics majors. Investigation to be primarily computational in nature whereby students use bioinformatics or mathematical modeling software to interpret, expand, or refine datasets. Use of graphics software to prepare graphs, illustrations for presentations, posters, reports, and websites (database entries). Research accomplishments discussed in weekly seminar-style meetings in which student groups create PowerPoint slides and formally present results to class. Production of team poster and final report describing entire research project required. Letter grading.

120. Introduction to Plant Biology. (4) Lecture, three hours; discussion, two hours. Enforced prerequisites: Life Sciences 3, 4, 23L. Introduction to plant biology, as well as to concepts and techniques in molecular biology and genetics. Letter grading.


M140. Cell Biology: Cell Cycle. (5) Same as Biological Chemistry M140.) Lecture, four hours; discussion, one hour. Requisites: Chemistry 14A, 14B, and 14BLL, or 20A, 20B, and 20L. Cell Biology 3, 4, 23L. Not open for credit to students with credit for course 104AR or 165B. Satisfies premedical requirements. Eukaryotic cellular structures and biogenesis at molecular level. Biochemical and genetic analysis of cell cycle, signal transduction, and their involve...
ment in development and cancer. Protein sorting and transport across cell membranes. Cytoskeletal components. A survey of experimental approaches to discover fundamental genetic, neronous, and other organism systems to provide examples of tissue-specific stem cells and their impact in human disease. Examination of various major organisms as examples of how model organisms have helped to discover fundamental principles of stem cell biology. How advances in cell and molecular biology and tissue engineering can be applied to use of stem cells in regenerative medicine. How critical ethical issues related to stem cell research. Letter grading.


172. Genomics and Bioinformatics. (5) Lecture, three hours; discussion, one hour. Requisite: course 144 or 166B or Chemistry 153B or Microbiology 132. Genomics is study of complete set of mole-
cules in cells. Topics include human and yeast genome sequences and genetic approaches to study of function of individual genes, fundamental bioinformatics algo-
rithms used to study relationship between nucleotide and protein sequences and reconstruction of their evolution, use of microarray technologies to measure changes in gene expression, analysis of microarray data including clustering and promoter analysis, protein-protein interaction studies including protein expression and interaction, epigenetic study of DNA methylation and chromatin modification, and systems biology, or combination of these approaches to study of human genome data to gain more understanding of cellular biology. Letter grading.

C174A-C174D. Advanced Topics in Cell and Molecular Biology: (2 each) Lecture, two hours. Requisites: courses 100 or C139 or M140, 144, Life Sciences 4. Recent developments in fields of molecular, cell, and developmental biology. Concurrently scheduled with courses C222A-C222D. Letter grading.

C174A. Molecular Evolution. (2) Lecture, two hours. Requisites: courses 100 or C139 or M140, 144, Life Sciences 4. Current developments in field of molecular evolution. Constructing evolutionary trees at molecular level; formal techniques for hypothesis testing using sequencing data. Letter grading.


M175A. Cellular and Systems Neuroscience. (5) Lecture, four hours; discussion, 90 minutes. Requisites: Chemistry 14C or 30A (14C may be taken concurrent-ly), Life Sciences 2, Physics 1B or 18B or 6B or 6BH. Not open for credit to students with credit for Physiological Science 111A. For Neuroscience and Physiological Science majors only. Letter is required to proceed to Neuroscience M101B or Physiological Science 111B. Cellular neurophysiology.
membrane potential, action potentials, and synaptic transmission. Sensory systems and motor system; how assessment processes control and coordinate movement. P/NP or letter grading.

M175B. Molecular and Developmental Neuroscience. (5) Lecture, four hours; discussion, 90 minutes. Requi- site: course M175A or Neuroscience M101A or Physiological Science M117A; Psychology M117A; Neuroscience majors must have grade of C– or better) or Physiological Science 111A or Psychology 115, Life Sciences 3, 4 (a may be taken concurrently). Molecular biology of channels and receptors: focus on voltage-dependent channels and neurotransmitter recep- tors. Molecular biology of supramolecular mechan- isms: synaptic transmission, axonal transport, cyto- skeleton, and motors. Developments in modern molecular approaches in developmental neu- robiology. P/NP or letter grading.

M175C. Behavioral and Cognitive Neuroscience. (5) Lecture, four hours; discussion, 90 minutes. Requi- site: course M175A or Neuroscience M101A or Physiological Science M180A or Psychology M117A; Neuro- science majors must have grade of C– or better) or Physiological Science 111A or Psychology 115, Life Sciences 3, 4 (a may be taken concurrently). Molec- ular biology of channels and receptors: focus on voltage dependent channels and neurotransmitter receptors. Molecular biology of supramolecular mechanisms: synaptic transmission, axonal transport, cytoskeleton, and motors. Developments in modern molecular approaches in developmental neurobiology. P/NP or letter grading.

180A. Research ApprenticeSchip Seminar I: Molecular, Cell, and Developmental Biology. (2) Seminar, two hours. Enforced requisites: courses 104, 150L or 187A; Psychology M117A or Psychology 115, Life Sciences 3, 4, 3.0 premajor and/or major, departmentally sponsored experimen- tal or temporary courses, such as those taught by vis- iting faculty members. May be repeated for credit with topic change. Letter grading.

180B. Research ApprenticeSchip Seminar II: Molecular, Cell, and Developmental Biology. (2) Seminar, two hours. Enforced requisites: courses 104, 150L or 187A; Psychology M117A or Psychology 115, Life Sciences 3, 4, 3.0 premajor and/or major, departmentally sponsored experimen- tal or temporary courses, such as those taught by vis- iting faculty members. May be repeated for credit with topic change. Letter grading.

181A. Biological Bases of Psychiatric Disorders. (4) (Formerly numbered 181A.) Lecture, six hours. Enforced requisites: courses 188A or 188B or 188C or 199 or 199A or 199B. Department maj- ors must have grade of C– or better) or Psychology M179B. Departmentally sponsored experi- mental or temporary courses, such as those taught by vis- iting faculty members. May be repeated for credit with topic change. Letter grading.

181B. Psychiatric Developmental Biology. (4) (Formerly numbered 181B.) Lecture, six hours. Enforced requisites: courses 188A or 188B or 188C or 199 or 199A or 199B. Department maj- ors must have grade of C– or better) or Psychology M179B. Departmentally sponsored experi- mental or temporary courses, such as those taught by vis- iting faculty members. May be repeated for credit with topic change. Letter grading.

186B. Honors Research Seminar in Molecular, Cell, and Developmental Biology. (4) Seminar, two hours. Enforced requisites: courses 188A or 188B or 188C or 199 or 199A or 199B. Course 186A is required for credit. P/NP or letter grading.

187A. Research Laboratory in Genomic Biology. (5) (Formerly numbered 187A.) Lecture, one hour; laboratory, six hours; research group meeting, two hours. Enforced requisites: Life Sciences 4, 23L. Course 187A is enforced requisites: course 187B. Limited to Molecular, Cell, and Developmental Biology and Microbiology, Immunology, and Molecular Genetics majors. Not open for credit to students with credit in or concurrently enrolled in course 187A. Introduction to cutting-edge genomic technolo- gies and bioinformatics methods and resources for genome annotation. Students propose original re- search projects and conduct research in collaboration with their projects using bioinformatics tools. Latest as- sembly of DNA and RNA from Cyclotella Cryptica, al- gea organism that has limited genome annotation in- formation available, to be provided. May not be re- peated for credit. Letter grading.
Selected topics from principles of biological structure: structures of globular proteins and RNAs; structures of fibrous proteins; secondary structures of nucleic acids; structures of globular proteins and RNAs; structures of fibrous proteins; secondary structures of nucleic acids; structural biology of extracellular matrix proteins and their assembly into supramolecular structures.


242. Topics in Neurobiology. (4) Lecture, two hours; discussion, one hour.Recent research developments in fields of cellular, molecular, and developmental biology. Discussion of original papers. May be repeated for credit. Letter grading.

248. Seminar: Topics in Cell Biology. (2) Seminar, two hours; discussion, one hour. Recent research developments in fields of cellular, molecular, and developmental biology. Discussion of original papers. May be repeated for credit. Letter grading.

255. RNA Editing. (4) Lecture, three hours; discussion, one hour. Preparation: knowledge of molecular biology and genetics. Discussion of novel RNA modification phenomena known as RNA editing. Topics include U insertion/deletion type of editing in trypanosomes and C to U substitution type of editing in apicoplast RNA and plant mitochondria. C insertion editing in Physarum mitochondria, etc. Discussion of mechanism, function, and evolution of these phenomena. Letter grading.

256. Seminar: Plant Morphogenesis. (2) Seminar, two hours. S/U or letter grading.

257. Seminar: Developmental Biology. (2) Seminar, two hours. S/U or letter grading.

258. Seminar: Molecular Genetics of Development. (2) Seminar, two hours. Preparation: knowledge of molecular biology. Discussion and discussion of current topics in extracellular active structural macromolecules — their synthesis, structure, and roles in cell and developmental biology. Letter grading.

267. 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.

269. Current Topics in Plant Molecular Biology. (2) Discussion, one hour. Recent research developments in field of plant molecular biology. Opportunities for graduate students to discuss individual research work. S/U grading.

272. Seminar: Developmental Biology. (2) Seminar, two hours. Preparation: knowledge of molecular biology and genetics. Discussion of novel RNA modification phenomena known as RNA editing. Topics include U insertion/deletion type of editing in trypanosomes and C to U substitution type of editing in apicoplast RNA and plant mitochondria. C insertion editing in Physarum mitochondria, etc. Discussion of mechanism, function, and evolution of these phenomena. Letter grading.


M222B. Molecular Biology of Cell Nucleus. (2) Lecture, two hours. Preparation: courses 100 or C139 or M140, 144, Life Sciences 4. Recent developments in fields of cellular, molecular, and developmental biology. Constructive evolutionary trees at molecular level; formal testing of evolutionary hypotheses using sequencing data. Original research proposal required. Letter grading.

M222D. Molecular Biology of Extracellular Matrix. (2) Lecture, two hours. Preparation: courses 100 or C139 or M140, 144, Life Sciences 4. Recent developments in fields of cellular, molecular, and developmental biology. Constructive evolutionary trees at molecular level; formal testing of evolutionary hypotheses using sequencing data. Original research proposal required. Letter grading.

M240. 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.


M255. RNA Editing. (4) Lecture, three hours; discussion, one hour. Preparation: knowledge of molecular biology and genetics. Discussion of novel RNA modification phenomena known as RNA editing. Topics include U insertion/deletion type of editing in trypanosomes and C to U substitution type of editing in apicoplast RNA and plant mitochondria. C insertion editing in Physarum mitochondria, etc. Discussion of mechanism, function, and evolution of these phenomena. Letter grading.

M256. Seminar: Human Genetics and Genomics. (4) Same as Microbiology C256.) Lecture, three hours; discussion, two hours. Preparation: Life Sciences 3, 4. Application of genetic principles in human populations, with emphasis on genomics, family studies, ploidal cloning, Mendelian and common diseases, cancer genetics, animal models, cytogenetics, pharmacogenetics, population genetics, and genetic counseling. Letter grading, 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 for graduate students. Letter grading.

M261A-261B. Seminars: Development, Stem Cells, and Disease Mechanisms. (2-2-2) Seminar, two hours. Limited to graduate students. Advanced course based on research work 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. Preparation: 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.


M283. 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.

M285. Seminar: Structural Macromolecules. (2) Seminar, one hour; discussion, two hours. Preparation: at least one advanced undergraduate course and at least one advanced graduate course and at least one advanced graduate course in chemical biology or biochemistry or bioinformatics. 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.

M287. 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.

M296. Advanced Topics in Parasitology, Cellular, and Developmental Biology. (2) Discussion, three hours. Advanced study and analysis of current topics in cell, molecular, and developmental biology. Discussion of current research and literature in research speciality of faculty member teaching course. S/U grading.
Molecular, Cellular, and Integrative Physiology

Interdepartmental Program
College of Letters and Science and David Geffen School of Medicine

UCLA
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Los Angeles, CA 90095-7246
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fax: (310) 206-9184

e-mail: mcarr@physci.ucla.edu
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James G. Tidball, Ph.D., Chair

Faculty Committee
Mansoureh Eghbali, Ph.D. (Anesthesiology)
Mark A. Frye, Ph.D. (Integrative Biology and Physiology, Neurobiology)
David L. Glanzman, Ph.D. (Integrative Biology and Physiology, Neurobiology)
Thomas J. O’Dell, Ph.D. (Physiology)
James G. Tidball, Ph.D. (Integrative Biology and Physiology, Pathology and Laboratory Medicine)
Yibin Wang, Ph.D. (Anesthesiology, 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 arid test physiological principles, and of functional specializations of organisms that have evolved under the influence of different 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, 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 presentation of current research literature in field of molecular, cellular, and developmental biology, including workshops, seminars, apprentice teaching, and peer observation. S/U grading.

Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website, http://grad.ucla.edu/gasaa.

Graduate Courses

M200G. Biology of Learning and Memory. (4) (Same as Neurobiology M200G, Neuroscience M220, and Psychology M220G.) Lecture, four hours. Mammalian, cellular, circuit, systems, neuromathematics, theory, and models of learning and memory. Cross-disciplinary focus on learning and memory to provide an 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.


M249. Seminar: Pathogenic Mechanisms in Muscle Diseases I. (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.


M252B. Seminar: Molecular Mechanisms of Human Diseases I. (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 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 Diseases II. (4) (Same as Pharmacology 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. Seminar: Molecular Mechanisms of Human Diseases II. (2) (Same as Pharmacology 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 M252A. Letter grading.
and behavior in example model systems. Discussion of mechanisms of interaction between neural circuits and their role in cognition, learning, and sleep. Computer laboratory component where students learn to write simple codes to quantify neural activity patterns. S/U or letter grading.

290A-290B-290C. Tutorials. (4–4–4) 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 56-070 Center for the Health Sciences Box 951772 Los Angeles, CA 90095-1772

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Oliver Hankinson, Ph.D., Chair

Faculty Committee

Jesús A. Arsujo, M.D., Ph.D. (Medicine)
Michael D. Collins, Ph.D. (Environmental Health Sciences)
Hilary A. Godwin, Ph.D. (Environmental Health Sciences, Institute of the Environment and Sustainability)
Oliver Hankinson, Ph.D. (Environmental Health Sciences, Pathology and Laboratory Medicine)
David E. Krantz, M.D., Ph.D. in Residence (Psychiatry and Biobehavioral Sciences)
Robert H. Schiestl, Ph.D. (Environmental Health Sciences, Pathology and Laboratory Medicine)

Scope and Objectives

Faculty from 15 departments and schools at UCLA, including Chemistry and Biochemistry, Environmental Health Sciences, Epidemiology, Medicine, Molecular and Medical Pharmacology, and Pathology and Laboratory Medicine, have joined forces to create an interdisciplinary Ph.D. program in Molecular Toxicology that is administered through the Fielding School of Public Health. Specialties within the program include, but are not limited to, neurotoxicology, nanotoxicology, developmental toxicology, genetic toxicology, and carcinogenesis. There is a particular emphasis on mechanisms of toxicity, since it is now widely accepted that understanding mechanisms will provide the means for accurately determining risk.

New chemicals have been the basis for most of the technological developments during the past century; and there is no question that 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 toxic action, predict the toxicity of new chemical entities, and protect organisms from them. Toxicology has used the basic disciplines of chemistry, biochemistry, and cell biology to advance understanding of toxicological phenomena, and the growth of the sophistication of toxicology has paralleled the increase in knowledge derived from the 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://grad.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 aimed at undergraduate student, 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) or enrolled.


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 in the development of toxicological hypotheses for data in papers, how to formulate ideas and hypotheses, how to 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.

M245. Laboratory in Toxicological Methods. (2) (Same as Environmental Health Sciences M245 and Pharmacology M234C.) Lecture, four hours; laboratory, four to five hours. Survey of experimental techniques now widely accepted that understanding 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 toxic action, predict the toxicity of new chemical entities, and protect organisms from them. Toxicology has used the basic disciplines of chemistry, biochemistry, and cell biology to advance understanding of toxicological phenomena, and the growth of the sophistication of toxicology has paralleled the increase in knowledge derived from the 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://grad.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 aimed at undergraduate student, 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) or enrolled.


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M245. Laboratory in Toxicological Methods. (2) (Same as Environmental Health Sciences M245 and Pharmacology M234C.) Lecture, four hours; laboratory, four to five hours. Survey of experimental techniques now widely accepted that understanding 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 toxic action, predict the toxicity of new chemical entities, and protect organisms from them. Toxicology has used the basic disciplines of chemistry, biochemistry, and cell biology to advance understanding of toxicological phenomena, and the growth of the sophistication of toxicology has paralleled the increase in knowledge derived from the basic chemical and biological sciences.
Moving Image Archive Studies

Interdepartmental Program
Graduate School of Education and Information Studies and School of Theater, Film, and Television

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Allyson N. Field, Ph.D. (Film, Television, and Digital Media)
Jan-Christopher Horak, Ph.D. (Film, Television, and Digital Media)
Ellen J. Pearlstein, M.A. (Information Studies)
Mark Quigley (Film, Television, and Digital Media)

Scope and Objectives

The Moving Image Archive Studies M.A. is an interdepartmental degree program offered jointly by the Department of Information Studies and the Department of Film, Television, and Telecommunication Studies. The core components of the program include courses in the history and history of moving image media, cataloging and access, preservation and restoration, and archival administration. Students are also required to complete a practicum in an archival setting, and the program offers opportunities for advanced study through a variety of seminars and independent research projects.

Graduate Courses

200. Moving Image Archiving: History, Philosophy, Practice (Seminar, four hours). Introduction to the history and practice of archiving moving image material. This course aims to provide students with a broad overview of the field of moving image archiving, including the historical development of archiving practices in the United States and the United Kingdom, and the role of archivists in the preservation of moving image material.

210. Moving Image Preservation and Restoration (Seminar, four hours). Critical analysis of archival practices related to the preservation and restoration of moving image material. This course focuses on the technical aspects of preservation and restoration, including the evaluation of current preservation strategies, the identification of preservation problems, and the application of preservation techniques.

220. Archaeology of Media (Seminar, four hours). History of moving image technologies. Examination of the historical development of the moving image, including the evolution of technologies and the impact of technological change on the production and consumption of moving image material.

230. Moving Image Cataloging (Seminar, four hours). Introduction to cataloging practices used for the description of moving image material, including the use of metadata and the application of classification systems.

240. Archival Administration (Seminar, four hours). Advanced topics in archival administration, including the management of archival collections, the development of preservation policies, and the implementation of preservation strategies.

Special Topical Courses

298. Special Topics in Moving Image Archive Studies (Seminar, two to four hours). Individual seminars focusing on specialized topics in moving image archiving, such as the preservation of digital media, the management of telematic archives, and the preservation of moving image material in virtual environments.

596. Directed Individual Study or Research (Seminar, two to four hours). Independent study or research on a topic of interest to the student, with faculty supervision.

599. Ph.D. Dissertation Research. (6 to 12) Tutorial, to be arranged. May not be applied toward degree course requirements. May be repeated for credit. S/U grading.

Contact Information

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Music

School of the Arts and Architecture

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Professors
Kenneth E. Burrell, B.A.
Vladimir Chernov, M.M.
Paul S. Chihara, Ph.D.
Juliana K. Gondek, M.M.
Gary G. Gray, M.M.
Gordon Henderson, M.M.E.
Peter D. Kazazas, J.D.
Ian Krouse, D.M.A.
Jens H. Lindemann, M.M.
Antonio Lyons
Donald Neuen, M.A.
Movses Pogossian, D.M.A.
Walter Poncé, D.M.A.
Neal H. Stubberg, M.A.
Guillaume B. Sute, M.M.
Robert S. Winter, Ph.D. (Presidential Professor of Music and Interactive Arts)

Professors Emeriti
Elaine R. Barkin, Ph.D.
Roger Bourland, Ph.D.
Maurice Gerow, Ph.D.
Frederick F. Hammond, Ph.D.
Thomas F. Harmathy, Ph.D.
Mark Kaplan, B.A.
Henri Lazarof, M.F.A.
D. Thomas Lee, D.M.A.
Susan McClary, Ph.D.
Paul V. Reale, Ph.D.
Jon Robertson, D.M.A.
Roy E. Travis, M.A.
Robert Walser, Ph.D.

Associate Professors
Michael E. Dean, M.M.
Inna Faliks, D.M.A.
Frank Heuser, Ph.D.
David S. Lefkowitz, Ph.D.

Senior Lecturer S.O.E.
Sheridon W. Stokes, Emeritus

Lecturer S.O.E.
Maureen D. Hooper, Ed.D., Emerita

Senior Lecturer
John L. Hall, M.M., Emeritus

Lecturers
Raynor O. Carroll
Gloria C. Cheng
Chris J. Cooper
Jonathan D. Davis, D.M.A.
Theresa A. Dimond, D.M.A.
Margaret M. Flanagan Lars
Don Franzen, J.D.
Rakete H. Hak, M.M.
Fritz Koenig, M.M.
Kane Matsumoto
James T. Miller
Lou Anne Nellis, M.A.
Richard O’Neill, M.A.
Jean-Louis Rodriguez
John A. Steinmetz, M.A.

Adjunct Professors
Christopher Hanulik, B.M.
Jennifer Judkins, Ph.D.
Douglas H. Masek, D.M.A.

Adjunct Associate Professors
Christoph Bull, D.M.A.
Mark C. Carlson, Ph.D.
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 Department 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 preparatory training for a broad range of careers in music after students graduate.

The four-year Bachelor of Arts curriculum in Music is a classically oriented, balanced program of practical, theoretical, and historical studies, with related performance and academic studies in non-Western music. The major, designed for students who want to combine fine musicianship with academic excellence, is based on a core curriculum of theory, history, analysis, and individual and group performance. Given in the context of a liberal education, this provides a foundation for an academic or professional career and affords valuable cultural background.

At the graduate level, specialized studies leading to the degrees of Master of Arts and Doctor of Philosophy are offered in composition; specialized studies leading to the degrees of Master of Music and Doctor of Musical Arts are offered in all classical solo instruments, voice, collaborative piano, and conducting. Jazz performance is offered at the master’s degree level.

Students interested in a concentration in music history and literature should consider the majors in Music History and Musicology offered through the College of Letters and Science; those interested in a concentration in world music should consider the major in Ethnomusicology offered through the School of the Arts and Architecture.

Undergraduate Study
The Music major is a designated capstone major. Students learn about the real world with respect to putting on concerts. Through preparation for and execution of their senior recitals, students demonstrate a level of proficiency appropriate for their role in the recitals and their understanding of performance practices appropriate to the repertory being performed, as acquired in previous coursework and through research. Students also display their ability to assemble an effective program in terms of pacing and variety and demonstrate requisite stage presence along with an ability to communicate with their audience in performance.

Music 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
All entering freshmen are required to take the Music Theory Assessment Examination either during New Student Orientation or during zero week of Fall Quarter. The examination score is used to determine eligibility and placement in first-year music core courses (Music M10A, M10B, M10C and 20A, 20B, 20C). Examination results may require enrollment in Music 3 as a requisite to both courses M10A and 20A. Entering transfer students with fewer than 15 units of prior music theory must take the Music Theory Assessment Examination.

Required for all concentrations except music education:
Music M10A, M10B, M10C, with grades of C- or better, 20A, 20B, 20C, with grades of C or better, 12 units from courses 60A through 65, and two years (12 units) of performance organizations utilizing students’ major instruments (courses C90A through 90N and C90Q through 90S), as assigned by the chair or designated faculty member. 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 M10A, M10B, M10C, with grades of C- or better, 20A, 20B, 20C, with grades of C or better, 12 units from courses 60A through 65, and three years (18 units) of performance organizations utilizing students’ major instruments (courses C90A through 90N and C90Q through 90S), as assigned by the chair or designated faculty member. In addition, students are required to take one college year—or at least one course at level three—of French, German, Italian, or Spanish, which may be used to fulfill the school language requirement.

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, 112A, 123A, 123B, 123C, 127E, and at least 8 elective units selected from any upper division ethnomusicology, music, or music history courses. 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 100A, 100B, 100C, 110, 111A, 114A through 114H, 116, 117 (or C118A), 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), and 8 elective units selected from any upper division ethnomusicology, music, or music history.
courses. During each term in which students take private lessons, they must participate in a performance organization for a letter grade, utilizing their major instruments (courses C90A through 90N and C90Q through 90S), as assigned by the chair or designated faculty member.

Theory: Six courses selected in consultation with a faculty adviser.

Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website, https://www.ucla.edu/gasasa/grad/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 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, intervals, and chord structure. 1B. Requisite: course 1A. Diatonic harmony; four-part writing, including inversions, seventh chords, secondary dominants, and modulation; organization of melody and accompaniment; simple analysis; sight-singing and ear training.

3. Preparatory Music Theory. (4) Lecture, four hours; laboratory, one hour. Course in music fundamentals, including music notation, theory, and terminology. Letter grading.

4A-4B-4C. Basic Musicianship. (2-2-2) Studio, three hours. Class instruction in elementary ear training and keyboard skills. P/NP or letter grading.

5. Beginning Voice Class. (2) Studio, four hours; outside practice and preparation, two hours. Not open to voice majors. Corequisites: singing techniques, including vocal mechanism, posture and breathing, including repertoire and stage movement coaching. May be repeated with credit without limitation. P/NP or 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 music and cultural practice. 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. May be repeated for credit without limitation. 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, diction, and interpretation. Beginning vocal repertoire used as vehicle for understanding these concepts. May be repeated for credit without limitation. Offered in summer only. P/NP or letter grading.

80W. Woodwind Technique for Beginners. (4) Laboratory, 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 graduate Ethnomusicology, Music, and Music History majors. Study and analysis of current and/or special topics in ethnomusicology, music, and music history taught by resident and visiting faculty members. May be repeated for credit with topic and instructor change. Letter grading.

C90A. UCLA Chorale. (2) Activity, four hours. Prepar- ration: audition. Selected mixed ensemble of 100 voices performing chamber and choral works. Offered in summer only. P/NP or letter grading.

C90B. University Chorus. (2) Activity, two hours. Preparation: audition. Mixed chorus of 100 voices performing medium- and concert-length choral works from baroque to present. May be repeated for credit without limitation. May be concurrently scheduled with course C480. P/NP or letter grading.

C90C. Chamber Singers. (2) Activity, three hours. Preparation: audition. Select mixed ensemble of 16 to 20 voices performing chamber choral music of all periods, with emphasis on Renaissance and baroque music. May be repeated for credit without limitation. P/NP or letter grading.

C90D. Opera Workshop. (2) Activity, six hours. Prepara- tion: audition. 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.

C90E. 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 C481. P/NP or letter grading.


C90L. Music Theater Workshop. (2) Activity, six hours. Preparation: 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.

C90M. Marching and Varsity Bands. (2) Activity, four hours. Preparation: audition. Group performance of special band arrangements for football and other special events. 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. Req-

ues: courses 20A, 20B, 20C, 116, 120A, 120B, 120C. Study and practice of conducting both instrumental and choral repertoire. In addition to further development of conducting gestures, focus on score study techniques, rehearsal techniques, style, repertoire, and performance. P/NP or letter grading.

110. Learning Approaches in Music Education. (4) Lecture, two hours; activity, two hours; outside study, eight hours. Study of different approaches 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 and comparison in context of major learning theories. Letter grading.

111A. Technology in Music Education I. (1) Labo-

ratory, three hours. Requisite or corequisite: course 20A. Lecture, four hours; discussion, one hour. Study of technologies necessary to teach music in schools. May include percussion. At least one reading by UCLA Chorale or other choral group scheduled. Letter grading.

111B. Technology in Music Education II. (1) Labo-

ratory, three hours. Requisite: course 111A. Introdu-

tion to instructional uses of computers in music class-

room, including multimedia applications. Letter grading.

112. Guided Field Experiences in Music Education. (4-2-2) Field studies, three hours. Initial field experience for students preparing to teach and earn single subject credential in music. Letter grading.

114A-114I. Study of Instrumental and Vocal Tech-

niques. (6) Lecture, three hours. Requisite: course 20A. Study of instrumental and vocal techniques in styles of given periods. Each course may be repeated once for credit. Letter grading.

117. Study and Conducting of Instrumental and Choral Literature. (2) Lecture, three hours. Requisite: course 116. Study and practice of conducting both instrumental and choral repertoire. In addition to further development of conducting gestures, focus on score study techniques, rehearsal techniques, style, and interpretation as applied to instrumental and choral repertoire. Letter grading.

118A. Advanced Choral Conducting. (2) Formerly numbered 118A. Lecture, one hour; studio, two hours. Requisites: courses 116, 117. Conducting basics, baton technique, beat patterns, dynamics, score preparation and analysis. May be repeated once for credit. Concurrently scheduled with course 211B. P/NP or letter grading.

118B. Choral Techniques and Methods. (2) Formerly numbered 118B. Lecture, one hour; studio, two hours. Requisites: courses 116, 117, 111A. 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 211B. P/NP or letter grading.

119. Vocal Techniques for Music Education. (2) Laboratory, three hours; outside study, three hours. Introduction to art of teaching voice, including anatomy of singing instrument, biomechanics of singing, diaphragm and connection of faults, health and care of voice, and instructional techniques. Letter grading.

120A. Music Theory IV. (4) Lecture, four hours; dis-

cussion, four hours. Preparation: passing score on comprehensive final exam. Requisite: course 20C with grade of C (2.0) or better. Theory: ba-

roque counterpoint including choral prelude; two-

part invention; exposition and first modulation of three-part invention; canonic principles; analysis of in-

vention, canons, and fugues. Musical rhetoric: sight-

singing of extended chromatic melodies; advanced harmonic dictation (diatonic and chromatic); keyboard arrangement of medley 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 harmony including development of harmonies from late 1850; analytical projects; style composition. Musi-

canship: advanced score reading; advanced harmon-

ic dictation; preparation for departmental examina-

tion. P/NP or letter grading.

120C. Music Theory VI. (4) Lecture, four hours; dis-

cussion, two hours; listening, two hours. Requisite: course 120B with grade of C (2.0) or better. 20th-cen-

tury harmonic language, including nonfunctional har-

mony, counterpoint, serialism, and minimalism. P/NP or letter grading.

121. Special Topics in 20th-Century Music. (4) Le-

cure, three hours. Requisites: courses 20A, 20B, 20C, 120A, 120B, 120C. Techniques of tonal coherence studied through analysis and compositional exercises in styles of given periods. May be repeated once for credit. May be concurrently scheduled with course 222. P/NP or letter grading.

122A-122B-123C. Composition. (4-4-4) Lecture,

three hours. Requisites: courses 20A, 20B, 20C, 120A, 120B, 120C. Course 123A is requisite to 123B, which is requisite to 123C. Designed for composition students. Vocal and instrumental composition in smaller forms, including style composition and 20th-

to 21st-century techniques. Each course may be repeated once for credit, but first year must be taken in sequence. P/NP or letter grading.

124. Scoring for Symphony Orchestra. (4) Dis-

cussion, three hours. Requisites: courses 106B, 120C (accelerated section), 123C. Practical applications in scoring for symphony orchestra. Preparation and pro-

duction of parts and full scores. At least one reading by UCLA Philharmonia Orchestra scheduled. Letter grading.

124B. Scoring for Wind Ensemble. (4) Discussion, three hours. Requisites: courses 106B, 120C (acceler-

ated section), 123C. Practical applications in scoring for large wind ensembles. Preparation and production of score and parts. 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: courses 106B, 120C (accelerated section), 123C. Practical applications in scoring and arranging for choral ensembles, including a capella as well as chorus with instruments. Prepara-

tion 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 Etnomusicology M131.) Lecture, four hours; discuss-

ation, one hour. Survey of the historical develop-

ment of musical style referred to today as Latin jazz. P/NP or letter grading.

136A-136B-136C. Historical Survey of Music The-

ater. (4-4-4) Lecture, four hours; discussion, one hour. Historical survey of major works from music theater, tracing development of art form from its European be-

ginning to American music theater of today. P/NP or letter grading.

136A. Early Forms to 1900; 136B. 1900 to 1945; 136C. 1945 to 1975.
140A-140B-140C. History and Analysis of Western Music. (5-5-5) Lecture, four hours; discussion, one hour. Survey of Western music; examination of perfor-
sative compositions within their cultural contexts and development of analytical methods appropriate to
each repertoire. Letter grading. 140A. To 1700. En-
forced requisite: course M10C or M87. Students must receive grade of C or better. 140C. To 1890. En-forced requisite: course 140A with grade of C or better, 140C. To 1890. Present. En-forced requisite: course 140B with grade of C or better.

C150. Keyboard Skills for Pianists. (2) Activity, two
hours; outside study, four hours. Applied music course with focus on necessary skills for piano perfor-
mances. Includes selection, learning, playing, score reading, transposition, figured bass, harmonization, improvisa-
tion, score reduction, and ensemble issues. Concurrently scheduled with course C450. P/NP or letter grading.

C155. Instrumental and Piano Duo Repertoire. (2) Activity, two
hours; outside study, four hours. Performance-based course that develops repertoire and experience in collaborative performance for pianists and instrumentalists. Activities include weekly score preparation, weekly rehearsals, regular coaching, and performances for lessons, juries, recitals, master classes, auditions, and other related activities. Regu-
lar coaches include members, weekly performance workshop, and rehearsals. Concurrently scheduled with course C455. P/NP or letter grading.

C158. 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 vocalists. Activities include text and score preparation, dic-
 tion, weekly rehearsals, regular coaching, and perfor-
mances for lessons, juries, recitals, master classes, auditions, and other related activities. Intensive dic-
 tion study incorporated. Regular coaching with faculty members, weekly performance class, and rehearsals. Concurrently scheduled with course C458. P/NP or letter grading.

160A-165. Undergraduate Instruction in Performance for Performance Specialist. (2 each) Studio,
one hour. Limited to junior/senior Music majors who have been accepted by audition into perfor-
mance specialization. Individual instruction. Students must perform in noon concert once during their junior year and in a final performance in their senior year. Grades 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. 160A: 161A. Violin; 161B. Viola; 161C. Cello; 161D. String Bass; 160E. Harp; 160F. Classical Guitar; 160G. Viola da gamba; 160K. Lute; 161A. Flute; 161B. Oboe; 161C. Clarinet; 161D. Bassoon; 161E. Saxophone; 162A. Trumpet; 162B. French Horn; 162C. Trombone; 162D. Tuba; 163. Percussion; 164A. Piano; 164B. Organ; 164C. Harpsichord; 165. Voice.

C167. Selected Topics in Keyboard Literature. (2) Lecture, two hours. Enforced corequisite; one course from 64A, 64B, 64C. In-depth study of selected topics in keyboard literature, con-
centrating on problems of performance through analy-
sis, historical and comparative studies, and actual performance. May be repeated one time if 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, vocal characteristics, inclusion of Inter-
ationals Phonetic Alphabet, translation of art song texts, and application to student's current vocal rep-
ertoire. Background in each language encouraged. P/NP or letter grading.

C175. Chamber Ensembles. (2) Activity, two hours. Preparation; audition. Students must be at advanced level of their instrument to participate. Applied study of performance practices of literature appropriate to ensemble, and preparation for all in two hours of work per term; total of 12 units may be applied toward degree requirements. May be concurrently scheduled with course C455. P/NP or letter grading.

C176. Electronic Music Composition. (4) Lecture, three hours; laboratory, three hours. Preparation: ad-
vanced knowledge of amplifying and electronic equip-
ment. Advanced course in serious composition (art music), two years of music theory. Limited to music composition majors. Exercises in electroacoustic orchestration, meta-pitch composi-
tion, notation software (Sibelius), sequencing and film scoring software (Logic, text collages (Pro-Tools), and final project. May be concurrently scheduled with course C226. P/NP or letter grading.

C177. Gluck Chamber Ensembles. (2) Studio, two hours. Preparation: audition. Selected chamber en-
sembles 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.

CM182. Music Industry. (4) (Same as Ethnomusico-
logy CM182, Music History CM166, and Music Indus-
ty M168.) Lecture, four hours; discussion, one hour; outside study, seven hours. Limited to Ethnomusicolo-
gy, 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 devel-
opment of audio recordings to MTV and popular mu-
sic today. Concurrently scheduled with course CM292. Lecture, three hours; outside study, six hours. P/NP grading.

C185. Historical and Philosophical Foundations of Music Education. (4) Lecture, three hours. Prepara-
tion: completion of undergraduate music education specialization. Development of music education in U.S. according to established schools of thought. May be concurrently scheduled with course C185. Additional assignments, as well as evidence of greater depth of study, required of graduate students. S/U or letter grading.

C186. Electronic Music Composition. (4) Lecture, three hours; laboratory, three hours. Preparation: ad-
vanced experience and accomplishment in serious composition (art music), two years of music theory. Design for graduate students. May be repeated one time if concurrently scheduled with course C186. Additional assignments, as well as evidence of greater depth of study, required of graduate students. S/U or letter grading.

C220. Advanced Choral Conducting. (2) Lecture, one hour; studio, two hours. Requisites: courses 116, 117, C218A. Vocal and choral pedagogy, vocal-
izing and warm-up techniques, diction, and rehearsal and classroom management. May be repeated once for credit. Concurrently scheduled with course C118B. Letter grading.

C222. Speculative Music Theory. (4) Discussion, three hours. Designed for graduate music students. Techniques of tonal coherence studied through analy-
sis and compositional exercises in styles of given pe-
noids. May be repeated once for credit. May be con-
currently scheduled with course C122. S/U or letter grading.

C225. Historical and Philosophical Foundations of Music Education. (4) Lecture, three hours. Designed for graduate students. Development of music educa-
tion in U.S. according to established schools of thought. May be concurrently scheduled with course C185. Additional assignments, as well as evidence of greater depth of study, required of graduate students. S/U or letter grading.

C226. Electronic Music Composition. (4) Lecture, three hours; laboratory, three hours. Preparation: ad-
vanced experience and accomplishment in serious composition (art music), two years of music theory. Designed for graduate students. May be repeated one time if concurrently scheduled with course C186. Additional assignments, as well as evidence of greater depth of study, required of graduate students. S/U or letter grading.

C235. Voice Pedagogy. (4) Lecture, three hours; outside study, four hours. Designed for Music majors. Approach to pedagogy. Examination of methods and tech-
iques not commonly used in analysis of vocal and instrumental music. Exercises in electroacoustic orchestration, meta-pitch composition, notation software (Sibelius), sequencing and film scoring software (Logic), text collages (Pro-Tools), and final project. May be concurrently sched-
uled with course C176. S/U or letter grading.


252. Seminar: Composition. (4) Seminar, three hours. Composition projects for varying acoustic instru-
mental and vocal ensembles. Students expected to per-
form their compositions from sketches at piano or prepare final version of file for UCLA student performers. S/U or letter grading.

253. Seminar: Special Topics in Composition and Theory. (4) Seminar, three hours. Intensive explo-
arion of specialized aspects of composition. May be re-
peated for credit. S/U or letter grading.

254. Advanced Music Analysis: Pre-Tonal Music. (4) Seminar, three hours. Designed to provide gradu-
ate composition students with in-depth exposure to complex and rich works of late Middle Ages through dawn of baroque era. Exploration of analytical tech-
niques and methods not commonly used in analysis of music of tonal and post-tonal persuasion. May be applied to make their interpretive decisions in perfor-
ance of vocal and instrumental music of Euro-
pean tradition. Topics include editions, treatises, tem-
po indications, expressive notation, and influence of music on history of thought and nonstandard notation. Letter grading.

260. Music Bibliography for Performers. (4) Lect-
ure, three hours; outside study, nine hours. Designed for gradu-
ate music students. Survey of general bibliographic techniques in music, with em-
phasis on materials for performing musicians. Letter grading.

261. Advanced Choral Conducting. (2) Lecture, one hour; studio, two hours. Requisites: courses 116, 117. Conducting basics, baton technique, beat pat-
terns, dynamics, score preparation and analysis. May be repeated once for credit. Concurrently scheduled with course C218A. Letter grade required.

262. Choral Techniques and Methods. (2) Le-
cure, one hour; studio, two hours. Requisites: courses 116, 117, C218A. Vocal and choral pedagogy, vocal-
izing and warm-up techniques, diction, and rehearsal and classroom management. May be repeated once for credit. Concurrently scheduled with course C118B. Letter grading.

264. Music Bibliography for Performers. (4) Lect-
ure, three hours; outside study, nine hours. Designed for gradu-
ate music students. Survey of general bibliographic techniques in music, with em-
phasis on materials for performing musicians. Letter grading.

294. Advanced Music Analysis: Pre-Tonal Music. (4) Seminar, three hours. Designed to provide gradu-
ate music students with in-depth exposure to complex and rich works of late Middle Ages through dawn of baroque era. Exploration of analytical tech-
niques and methods not commonly used in analysis of music of tonal and post-tonal persuasion. May be applied to make their interpretive decisions in perfor-
ance of vocal and instrumental music of Euro-
pean tradition. Topics include editions, treatises, tem-
po indications, expressive notation, and influence of music on history of thought and nonstandard notation. Letter grading.
260A. Seminar: Composition for Motion Pictures and Television. (6) Seminar, three hours; laboratory, three hours. Course in composition of music for commercial movies. Difference between underscore and source music and discussion of surrealistic effect when they merge, as in MTV, dream sequences, or montages. Study of three principal areas of filmmaking — preproduction, production (shooting), and post-production. Examples from classic movies and discussion of their scores. Composition of actual cues for actual film, coordinated to picture to be term project. 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 task of completing one entire score for television episode or original student film. Discussion of recent television shows. Composition of one original tite song and short cues to someone else’s song required. Term assignment involves student orchestra recording to picture, designed to approximate actual conditions of completing professional Hollywood assignment, from spotting to scoring. Letter grading.

261A-261J. Problems in Performance Practices. (4 each) Seminar, three hours; outside study, nine hours. Limited to graduate performance students. Investigation of exemplary contemporary readings in performance practices as related to period; analytical reports and practical applications in class demonstrations. May be repeated for credit. Letter grading. 261A. Medieval; 261B. Renaissance; 261C. Baroque; 261D. Classical; 261E. Romantic; 261F. Contemporary; 261J. Jazz.

267. Selected Topics in Keyboard Literature. (2) Lecture, two hours. Enforced corequisite: course 464A or 464B or 464C. In-depth study of selected topics in keyboard literature, concentrating on problems of performance through analysis, historical and comparative studies, and actual performances by participants. May be concurrently scheduled with course C167. S/U or letter grading.

270A-270G. Seminars: Music Education. (6 each) Seminar, three hours. May be repeated for credit without limitation. S/U or letter grading. 270A. History; 270B. Non-Western Musics; 270C. Curriculum Innovations; 270D. Tests and Measurements; 270E. Choral Literature; 270F. Instrumental Literature; 270G. General Topics.

271. Music and Electronic Technology. (4) Lecture, four hours; 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.

CM282. Music Industry. (4) (Same as Ethnomusicology CM288 and Musicology CM288.) 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 CM182. Letter grading.

290. Composition Forum. (2) Seminar, two hours. Weekly forum to present professional composers of 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 outside study. Topics announced in advance. May be repeated for credit. S/U or letter grading.

330. Introduction to Orff Schulwerk. (2) Lecture, 10 hours; discussion, five hours; laboratory, 15 hours. Intended 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.

331A-331B-331C. Orff Schulwerk Training Courses. (4–4–4) Lecture, 10 hours; discussion, five hours; laboratory, 15 hours. Requisite: course 330C. Course 331A is prerequisite to 331B and is required in addition to 331C. In-depth courses in teaching of Orff Schulwerk approach to music instruction for children. Students who successfully complete each course are eligible for certification at that level through American Orff Schulwerk Association. Offered in summer only. S/U or letter grading. 331A. Level I (Beginning); 331B. Level II (Intermediate); 331C. Level III (Advanced).

341. 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 and recently published literature and discussions of administration of band/wind ensemble programs. May be repeated for credit without limitation. Offered in summer only. S/U or letter grading.

343. Effective and Creative String Teaching. (2) Lecture, 24 hours. Orchestral course for teachers of strings and classes in orchestras at elementary, junior high, and high school levels. Topics include development of instructional techniques for violin, viola, cello, and bass; critical examination of current pedagogical materials; and reading sessions of recent published music for string orchestra. May be repeated for credit without limitation. Offered in summer only. S/U or letter grading.

343L. Effective and Creative String Teaching Laboratory. (1) Laboratory, 12 hours. Exploration of string orchestra, ensemble, and chamber music literature appropriate for elementary, junior high, and high school levels. Examination of this literature in reading and discussion sessions. May be repeated for credit without limitation. Offered in summer only. S/U or letter grading.

345. Symposium on Art of Choral Music. (2) Lecture, 25 hours. Symposium for college, high school, and junior high school choral directors on development of practical techniques for solving real challenges in choral conducting and teaching. Topics include choral methods, choral conducting, vocal pedagogy, voice classification, and survey of standard and current choral literature. Offered in summer only. S/U or letter grading.

350A. Introduction to Computer-Assisted Instruction of Music. (2) Lecture, three hours; laboratory, two hours. Introduction to instructional uses of computers in music classroom, with emphasis on practical information necessary to intelligently purchase and implement microcomputers in schools. Courseware to be experienced and reviewed, jargon defined and illustrated, and practical hands-on experience obtained. May be repeated for credit without limitation. Offered in summer only. S/U or letter grading.

350B. Exploration of MIDI Computer Resources: Keyboards and Synthesizers. (2) Lecture, two hours; laboratory, three hours. Creative use of MIDI-based music technology. Exploration of available hardware resources allied with various software sequencing packages. Use of software for computer-based music printing. Hands-on experience may be repeated for credit without limitation. Offered in summer only. S/U or letter grading.

371. Marching Band in Secondary Education. (2) Lecture, two hours. Study of contemporary marching bands and composers' roles in secondary education, including current approaches, practices, and problems associated with marching bands, as well as historical perspective. S/U or letter grading.

375. Teaching Apprentice Practicum. (1 to 4) Seminar, to be arranged. Preparation; apprentice personnel employment as teaching assistant, associate, or fellow. Teaching apprentice 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) Tutorial/laboratory, two hours. Preparation; one year of graduate study in music at UCLA. Interactive course in preparation and performance of premiere of pieces composed for graduate performer or performers by graduate composer at UCLA. Letter grading.

450. Keyboard Skills for Pianists. (2) Activity, two hours; outside study, four hours. Applied music course with focus on necessary skills, and performance practice. Areas include sight playing, score reading, transposition, figured bass, harmonization, improvisation, sound production, and ensemble skills. Concurrently scheduled with course C155. Letter grading.

455. Instrumental and Piano Duo Repertoire. (2) Activity, two hours; outside study, four hours. Performer-based course that develops repertoire and performance skills in collaborative performance of pianists and instrumentalists. Activities include weekly score preparation, weekly rehearsals, regular coaching, and performances for lessons, juries, recitals, master classes, auditions, and related activities. Intensive dic tion study incorporated. Regular coaching with faculty members, weekly performance classes, and rehearsals. Concurrently scheduled with course C155. Letter grading.

456. Vocal Repertoire Interpretation. (2) Activity, two hours; outside study, four hours. Performance-based course that develops repertoire and performance skills in collaborative performance for pianists and vocalists. Activities include text and score preparation, dictation, weekly rehearsals, regular coaching, and performances for lessons, juries, recitals, master classes, auditions, and other related activities. Intensive diction study incorporated. Regular coaching with faculty members, weekly performance classes, and rehearsals. Concurrently scheduled with course C155. 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 teaching methods and techniques, including discussions of philosophy of teaching, learning process itself, and teaching of musical interpretation. Individualized study of various considerations, such as psychological-technical aspects of musical performance, peculiar to teaching student's primary instrument. Letter grading.

470. Opera Studio for Graduate Students. (4) Laboratory, six hours. Designed for graduate students. Performance techniques and repertoire for graduate students in opera. S/U or letter grading.

471. Vocal Pedagogy. (4) Lecture, three hours; discussion, one hour. Preparation: advanced proficiency in voice. Designed for graduate music students. Study of teaching techniques for voice, including thorough investigation of vocal mechanism and its
use, plus study of noted teachers of past and present. Further emphasis on practical teaching experience in class. Letter grading.

472. Master Class in Opera. (6) Studio, three hours; outside study, 15 hours. Limited to graduate performance students. Intensive study and preparation of opera literature. May be repeated for credit. S/U or letter grading.

475. Master Class in Conducting. (6) Studio, three hours; outside study, 15 hours. Limited to graduate performance students. 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 ensembles who, after rehearsing and being coached on core amount of repertoire, play in outreach settings around Los Angeles community. May be repeated for credit without limitation. Concurrently scheduled with course C177. S/U grading.

C480. UCLA Chorale. (2) Activity, four hours. Preparation: audition. Designed for M.M. and D.M.A. students. Select mixed ensemble of 100 voices performing choral music appropriate for concert choral ensemble, vespers, and music after 1700. May be repeated for credit without limitation. May be concurrently scheduled with course C90A. Letter grading.

C481. Symphony Orchestra. (2) Activity, four hours. Preparation: audition. Group performance of symphonic literature, as well as orchestral accompaniment for operatic and major choral works. May be repeated for credit without limitation. May be concurrently scheduled with course C90E. Letter grading.


C484. Piano/Keyboard Accompanying. (2) Activity, four hours; outside study, two hours. Collaboration with large ensembles, instrumentalists, and/or vocalists in role of accompanists. Performance includes, but is not limited to, lessons, rehearsals, special studio performance projects, master classes, concerts, auditions, juries, and recitals. May be repeated for credit without limitation. 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.


489. Introductory Practicum for Teaching Apprentices in Music. (2) Eight weekly 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.

495. 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 educational 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.

Music Industry

Interdisciplinary Minor
School of the Arts and Architecture

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Faculty Committee
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Nina S. Eidsheim, Ph.D. (Musicology)
Robert W. Fink, Ph.D. (Musicology)
Juliana K. Gondev, M.M. (Music)
Roger A. Kendall, Ph.D. (Ethnomusicology)
Steven J. Loza, Ph.D. (Ethnomusicology)
James W. Newton, B.M. (Ethnomusicology)

Scope and Objectives

The Music Industry minor is an interdisciplinary and interdepartmental series of courses designed to (1) introduce students to a critical perspective on the formative effects of the music industry and music technology has had on musical practices around the world, (2) prepare students for employment in the music industry, including marketing and sales, recording production, intellectual property, sound recording, and arranging, and (3) contribute to improved communication and interaction between the University, the music industry, and the musical life of Los Angeles.

Undergraduate Study

Music Industry Minor

The Music Industry minor is intended to supplement the education of undergraduate students majoring in Ethnomusicology, Music, and Music History. To apply to the minor, transfer students must have completed a minimum of one term of residency at UCLA and students admitted as freshman must have completed a minimum of three terms of residency at UCLA. Students must be in good academic standing with an overall grade-point average of at least 2.0.

Required Upper Division Courses (28 units):
Music Industry 101, 195, three courses selected from one of the three clusters listed below, and two additional courses selected from one of the clusters listed below.

General Music Industry Cluster: See the minor adviser for an approved list of courses.


A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor.

With the exception of Music Industry 195 (mandatory P/NP grading), each minor course must be taken for a letter grade. Successful completion of the minor is indicated on the transcript and diploma.

Music Industry

Upper Division Courses

101. Seminar: Music Industry, Technology, and Science. (4) Seminar, four hours; outside study, eight hours. Required of Music Industry minors. Introduction to intellectual and theoretical frameworks that form Music Industry minor and that scholars of music and music industries have developed to analyze, understand, and perhaps judge what happens out there, including how music business works in financial, legal, global, and artistic terms, how music technologies of recording, reproduction, and consumption operate, and how basic music science from brain biology to music perception affects how music is produced and heard. Letter grading.

102. Internet Marketing and Branding for Musicians. (4) Seminar, four hours; outside study, eight hours. Digital world for musicians has changed dramatically. Musicians not only have ability to self-market and create communities directly with listeners, but also can thrive in online communities with influencers and other musicians around world. Digital has transformed not just way musicians get word out, but also how they create. Internet marketing has morphed into Internet community crowdsourcing — very different world for musicians and music organizations. Study driven by project-based work of current online environments for musicians, organizations, and venues. Students dive into best practices around world, growing brand, finding target market online, and engaging

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with right communities of practice to build their own connections and online portfolio of collaborators. Letter grading.

103. Music and Brain. (4) Seminar, four hours; outside study, eight hours. Multidisciplinary approach to understanding brain mechanisms mediating music perception, performance, and cognition. Students’ natural interest in music serves as springboard for learning basic concepts about how brain works. Focus on specific themes such as harmony perception, rhythm perception, emotion and meaning in music, and creativity. Designed to help students understand and methodologies currently used to investigate brain-behavior correlates. Broad understanding of research topics in cognitive neuroscience, one of three main subdisciplines of neuroscience; introduction to fundamental principles in neurophysiology, psychophysiology, and neuroanatomy, whose basic form foundation for brain imaging, forensic practice, social psychology research, and marketing research; and specific knowledge about brain mechanisms mediating music-related cognitive and emotional functions. Letter grading.

104. Music and Law. (4) Seminar, three hours; outside study, nine hours. Fundamentals of American law as it applies to entertainment business, with special attention to music and its use in film, television, and new media. Legal relationships in entertainment business, the practice of music law. Exploration of legal aspects of producing works in entertainment field, from acquisition of rights and talent through production and distribution. Letter grading.

105. Songwriters on Songwriting. (4) Lecture, three hours; outside study, eight hours. With special focus on songwriting renaissance of rock era, examination of work of greatest songwriters of post-World War II generation (circa 1952 to 1994) and those they have influenced through creative as well as practical industry guidance from current and noteworthy practitioners. Coverage of songwriting, arrangement and recording of music, music publishing, and record business in 20th and 21st centuries. Guest music industry professionals to demonstrate individual creative processes and discuss their paths to songwriting and their place in world of music. Course is not workshop or tutorial on how to write songs. Letter grading.

106. Stadnard Strategies for Musicians. (4) Lecture, four hours; outside study, eight hours. Help for students to determine what music career best serves their own lives and gives them tools that help them be successful in their lives and careers. Guest speakers, including top music agents, managers, publicists, and performers, to be featured. Letter grading.

107. Audio Technology for Musicians. (4) Studio, four hours; outside study, eight hours. Limited to Ethnomusicology, Music, and Music History majors. An extended exploration of audio technology, including equipment and techniques; recording; mixing; and mastering. Emphasis on instruction of the technical aspects and procedures of equipment and software (sequencers, recorders, mixers, microphones, and so on) most commonly used in contemporary music making. Main sound processing types (equalizers, compressors, reverberation). Fundamental aspects of most widespread music production software and hardware. P/NP or letter grading.

108. Founding and Sustaining Performing Arts Organizations. (4) Seminar, four hours. Examination of process of founding performing arts organizations, beginning with inspiration to do so, clarifying organization mission, and mechanics of becoming nonprofit corporations; issues of funding, press relations, finding appropriate venues, developing audience; mechanisms of generating revenue, sustainability, and running arts businesses; establishing relationships with other organizations in field; issues of making and distributing recordings. Students create on paper one performing arts organization including developing mission statement, preparing bylaws, and writing sample grant proposals. Letter grading.

M182. Music Industry. (4) (Same as Ethnomusicology CM182, Music CM182, and Music History CM186.) Lecture, four hours; discussion, one hour; outside study, seven hours. Limited to Ethnomusicology, Music, and Music History majors. Examination of influence of music industry on way music is created, performed, listened to, and used today. Historical approach taken, beginning with music published in 18th century and continuing through development of audio recordings to MTV and popular music today. Letter grading.

188. Special Courses in Music Industry. (4) Seminar, four hours; outside study, eight hours. Special topics in music industry for undergraduate students taught on experimental or temporary basis. May be repeated for credit with topic change. Letter grading.

195. Community or Corporate Internships in Music Industry and Technology. (4) Tutorial, eight hours. Limited to juniors/seniors in Music Industry minor with minimum cumulative 3.0 grade-point average. Internship in supervised setting in community agency or private business. Students meet on regular basis with instructor and provide periodic reports of their experiences. May be repeated for maximum of 6 units. Individual contract with supervising faculty member required. P/NP grading.

197. Individual Studies in Music Industry and Technology. (2 to 4) Tutorial, six to 12 hours. Limited to juniors/seniors in Music Industry minor with minimum cumulative 3.0 grade-point average. Individual intensive study in music industry and technology, with scheduled meetings to be arranged between faculty member and student. Tangible evidence of mastery of subject matter resulting in research project/paper required. May be repeated for maximum of 8 units. Individual contract with supervising faculty member required. Letter grading.

Musicology / 511

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Assistant Professors
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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.

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

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/admtoc.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 applied toward the major must be taken for a letter grade (courses offered only on a P/NP grading basis are acceptable).

Honors Program
The honors program is designed for Music History majors who wish to carry out an extended independent research project that culminates in a departmental honors thesis of approximately 30 pages. The program gives qualified students the opportunity to work closely with individual professors on an in-depth supervised research and writing project.

All junior and senior Music History majors who have completed a minimum of four upper division music history courses with a departmental grade-point average of 3.7 or better and an overall GPA of 3.0 or better are eligible to apply. Normally, the thesis must be completed during Fall Quarter of the senior year.

To qualify for graduation with departmental honors, students must (1) complete all requirements for the major, (2) have a cumulative grade-point average of 3.7 or better in upper division courses in the department and an overall GPA of 3.0 or better, and (3) complete at least one term of Music History 198 (2 units) with a grade of A– or better on the resulting thesis.

To qualify for graduation with departmental highest honors, students must (1) complete all requirements for the major, (2) have a 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 term 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.

A minimum of 20 units applied toward the major requirements must be in addition to units applied toward major requirements or another minor.

Each minor course must be taken for a letter grade (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 UCLA Division website, http://grad.ucla.edu/gasaa/library/pgmrqintro.htm. In many cases, more detailed guidelines may be outlined in announcements, on the 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

3. Introduction to Classical Music. (5) Lecture, four hours; discussion, one hour. Survey of music of Western classical tradition, with emphasis on historical context, musical meanings, and creation of tradition itself. P/NP or letter grading.

5. History of Rock and Roll. (5) Lecture, four hours; discussion, one hour. Analysis of forms, practices, and meanings of rock and roll music, broadly conceived, from its origin to present. Emphasis on how this music has reflected and influenced changes in sexual, racial, and class identities and attitudes. Letter grading.

6. Mozart. (5) Lecture, four hours; discussion, one hour. Survey of the works of Johann Sebastian Bach. P/NP or letter grading.

6. Mozart. (5) Lecture, four hours; discussion, one hour. Designed for undergraduate students. Life and works of Wolfgang Amadeus Mozart, in context of both his age and our own. P/NP or letter grading.

63. Bach. (5) Lecture, four hours; discussion, one hour. Designed for undergraduate students. Life and works of Johann Sebastian Bach. P/NP or letter grading.

64. Motown and Soul: African American Popular Music of 1960s. (5) Lecture, four hours; discussion, one hour. Survey of developments in post-World War II African American popular music, with special attention to musical achievements of Motown Records, Stax, and other rhythm and blues, funk, and soul music centers of production. Relationships between musical and cultural issues of 1960s, including Civil Rights Movement, counterculture, black nation-
alism, capitalism, and separatism, and larger dimensions of African American experience as mediated through groove-based music. P/NP or letter grading.

65. Blues in American Music. (5) Lecture, four hours; discussion, one hour. History of blues, both as specific genre and as range of techniques and approaches that have been at center of American music and culture, especially in 19th-century roots to present. Exploration of commonly accepted blues mainstream exemplified by figures like Bessie Smith, Robert Johnson, and B.B. King, but also central role blues has played in jazz, folk rock, soul, and today’s hip hop. Following evolution of music through 20th century, examination of how blues has served as metaphor for African American culture as it permeates American modernism, capitalism, and separatism, and larger dimensions of African American experience as mediated through groove-based music. Letter grading.


68. Beethoven. (5) Lecture, four hours; discussion, one hour. Examination of life and work of Ludwig van Beethoven. P/NP or letter grading.

70. Beethoven. (5) Lecture, four hours; discussion, one hour. Designed for undergraduate students. Life and works of Ludwig van Beethoven. P/NP or letter grading.

72. Sacred Music. (5) Lecture, four hours; discussion, one hour. Study of forms and liturgies of Western church music. P/NP or letter grading.

75. History of Jazz. (5) Lecture, four hours; discussion, one hour. History and analysis of variety of jazz styles, from late 19th-century forerunners to present, with emphasis on social meanings of musical practices. Letter grading.

79. Dancehall, Rap, Reggaeton: Beats, Rhymes, and Rhythm in African Diaspora. (5) Lecture, four hours; discussion, one hour. Survey of histories of three closely connected music genres: Jamaican dancehall, U.S. rap, and Puerto Rican/Panamanian reggaeton. Introduction to major performers in each genre, comparison of stylistic traits associated with each music, and exploration of technologies associated with contemporary music production. P/NP or letter grading.

86. Sonata, in Western Music. (5) Lecture, four hours; discussion, one hour. Examination of formative force of Internet on sounds themselves. What kinds of noises develop logically within digital context, where creative freedoms and public discounting are equally apparent? What does Internet sound like? P/NP or letter grading.

Upper Division Courses

125A-125F. Music, History, and Culture. (5 each) (Formerly numbered 26A-26B-26C and 126A-126B-126C) 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. Students must receive grade of C or better to proceed to next course in sequence. Introduction to history, culture, and structure of Western music through selected topics, repertoires, and analytical techniques. Vernacular and cultivated styles of early Middle Ages to present. Letter grading.

125A. To 1500. Requisite or corequisite: course M10A, 125B. 1500 to 1700. Requisites: courses M10B (may be taken concurrently), 125A, 125C. 1700 to 1800. Requisites: courses M10C (may be taken concurrently), 125B, 125D, 1800 to 1900. Requisite or corequisite: course M10A, 125E. 1900 to 1945. Requisites: courses M10B (may be taken concurrently). 125D, 125F. 1945 to Present. Requisites: courses M100C (may be taken concurrently), 125E.


133A-133B-133C. History of Opera. (5-5-5) Lecture, four hours; discussion, one hour. Designed for undergraduate students. P/NP or letter grading. 133A. Baroque and Classical Periods; 133B. Romantic Period; 133C. 20th Century.

M136. Music and Gender. (8) (Same as Gender Studies M136) Lecture, four hours; discussion, one hour. Analysis of gender ideologies in several musical cultures; representations of gender, body, and sexual identity by male and female musicians; contributions of women to Western art and popular musics; methods in feminist and gay/lesbian theory and criticism. Letter grading.

M137. Lesbian, Gay, Bisexual, Transgender, and Queer Perspectives in Pop Music. (5) (Same as Lesbian, Gay, Bisexual, and Transgender Studies M137) Lecture, four hours; discussion, one hour. Survey of English-language popular music in 20th century, with focus on lesbians, gay men, and members of other sexual minorities as creators, performers, and audience members. Letter grading.

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 records, under movies, behind ads, and in semiotic fabric of everyday life. Letter grading.


165. Blues and Individual Expression. (5) Seminar, two hours. Enforced corequisite: attendance, but not enrollment, in course 65 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. (6), (5) Seminar, two hours. Enforced corequisite: attendance, but not enrollment, in course 68 lecture. Exploration of central issues and cultural context of music of 1960s as they crystallize or are brought out by events of 1968 to understand 1968 not as one iconic year in itself, but rather to use it as lens for observing cultures of music and music-making in 1960s. Letter grading.

170. Beethoven: Study of Selected Works. (5) Seminar, 90 minutes. Corequisite: attendance, but not enrollment, in course 70 lecture. Designed to meet needs of students who read music and wish to examine Beethoven’s music in greater depth. Letter grading.

172. Selected Topics in Sacred Music. (5) Seminar, two hours. Enforced corequisite: attendance, but not enrollment, in course 72 lecture. Introduction to some ways that music has been held to embody, support, and enact sacredness, including experience of god(s), sense of transcendental, work of liturgy, and intersecting of music, politics, and power, with special focus on folk music and early music revivals. Letter grading.


CM186. Music Industry. (4) (Same as Ethnomusicology CM182, Music CM182, and Music Industry M182.) Lecture, four hours; discussion, one hour; outside study, seven hours. Limited to Ethnomusicology, Music, and Music History majors. Examination of influence of music industry on way music is created, performed, 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 of today. Concurrently scheduled with Musicology CM288. Letter grading.

187. Preparatory Class for Music History Majors. (2) Seminar, two hours. Limited to Music History majors. Student preparation for completing capstone course. Preparing for Fall Quarter seminars. Topics include research methods, engagement with 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.
Musicology

Graduate Courses

200A. Introduction to Music Scholarship. (8) Seminar, three hours. Examination of specific topics in musicology, ethnomusicology, and music studies. 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 structural arguments, evidence concerning theory 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 social theory, materialist theories of culture, postcolonialism, critical theory, and musical analysis. Special topics may be offered in critical theory or of group of theories selected by instructor, including feminism, performance studies, sociology, historiography, urban studies, anthropology, philosophy, psychoanalysis, structuralism, gender and sexuality studies, lesbian, gay, bisexual, transgender, and queer studies, disability studies, and so on. Introduction to set body of theory in its relation to study of music. Letter grading. May be repeated for credit. 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 analytic perspectives on music in light of selected analytical and philosophical approaches to phenomenon of music and to acquire skills in analyzing and interpreting variety of repertoires. Letter grading.

201. Repertory and Analysis. (2) (Same as Music 201.) Seminar, two hours. Requisite or corequisite: course 200A. Exploration of defined repertory through readings and analysis of specific topics vary. May be repeated for credit. S/U grading.

245. Seminar: Analytical/Repertoire Topics. (4) Seminar, three hours. Designed for graduate musicology students. Coverage of analytical topics that vary from year to year. May be repeated for credit. S/U grading.

287. Seminar in Research Methods. (2) Seminar, two hours. Requisite or corequisite: course 200A. Specific topics vary from year to year. May be repeated for credit, 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. S/U grading.

251. Audit Seminar: Theoretical Topics. (2) Seminar, three hours. Requisite or corequisite: course 200A. Specific topics vary from year to year. May be repeated for credit. S/U grading.

255. Seminar: Historical Topics. (4) Formerly numbered 260G) Seminar, three hours. Designed for graduate musicology students. Coverage of historical topics that vary from year to year. May be repeated for credit. S/U grading.

256. Audit Seminar: Historical Topics. (2) Seminar, three hours. Requisite or corequisite: course 200A. Specific topics vary from year to year. May be repeated for credit. S/U 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; analysis of practical applications in class demonstrations. May be repeated for credit. Letter grading.


274. Seminar in American Popular Music. (4) Seminar, three hours. Designed for graduate students. Specific topics vary from term to term. May be repeated for credit. Letter grading.

CM288. Music Industry. (4) Same as Ethnomusicology CM288 and Music CM288.) Lecture, four hours; discussion, one hour; outside study, seven hours. Limited to Ethnomusicology, Music, and Musicology Majors. Examination of influence of music industry on world music creation, performance, listening, and consumption. May be repeated for credit. S/U grading.

289. Seminar: Research Methods. (2) Seminar, two hours. Limited to second-year graduate musicology students and students with master's degrees. Development of advanced knowledge and bibliographic competence in three historically separate areas: ethnomusicological specialization. May be repeated for credit. S/U grading.


375. Teaching Apprentice Practicum. (1 to 4) Seminar, to be arranged. Preparation: apprentice personnel fulfillment 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.

C490T. Early Music Ensemble. (4) Activity, four hours. Preparation: audition. Group performance of Western vocal and instrumental music from historical periods dating 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 CM490T, S/U or letter grading.

495. Introductory Practicum for Teaching Apprentice in Musicology. (2) Enroll in two semesters, 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.

996. Directed Individual Studies in Musicology. (2, 4, or 6) Tutorial, to be arranged. Limited to graduate students. S/U or letter grading.

997. 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

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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 East and Egyptology, Arabic, Iranian Studies, Jewish Studies, and Middle Eastern 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 East and Egyptology, (2) Arabic, (3) Iranian Studies, (4) Jewish Studies, and (5) Middle Eastern Studies. Each of these fields students must meet the requisites and take the courses prescribed. Their advisors assist in selecting a plan of study developed around their interests.

Students may combine their major with one in another department (double major) to enhance their educational opportunities. Due to the number of additional courses required, they are advised to consider this option early in their academic career and in consultation with program advisers in both majors.

Ancient Near East and Egyptology B.A.

Preparation for the Major

Required: Three courses selected from Ancient Near East 10W, 15, Middle Eastern Studies 50A, M50B, Near Eastern Languages M20. Each course must be taken for a letter grade.

Transfer Students

Transfer applicants to the Ancient Near East and Egyptology major with 90 or more units must complete the following introductory courses prior to admission to UCLA: a civilization course on Mesopotamia, Egypt, Near Eastern archaeology, or Middle Eastern cultures.

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 10 upper division courses as follows:

Required Core Courses: One course selected from four of the following five areas (total of four courses):

- History: Ancient Near East M103A through M104D, M110A, or Jewish Studies M182A.

Required Elective Courses: Any six courses (no more than three may be from Anthropology) selected from the categories above or from Ancient Near East 121A, 121B, 121C, 123A, 123B, 124, 125A, M125B, M125C, C177, Anthropology 110P, CM1100, 111, M115A, C115R, 117, 119P, 130, 150, English 111A, 111B, 111C, Greek 130, Hebrew 125, 130, 135, 188FL, Study of Religion M186A, M186B, M186C, Semitics 130, 141, 142.

A maximum of 8 units of special studies courses (197, 198, 199) approved by the department may be applied toward the major. Each course must be taken for a letter grade.

Study Abroad

Students are encouraged to spend time abroad either to (1) study with an education abroad program or (2) work on a UCLA-affiliated archaeological excavation in the broader Middle East. For information on studying abroad, contact the Education Abroad Program, B200 Murphy Hall, (310) 205-4995; for UCLA-affiliated excavations, contact the departmental academic counselor at (310) 205-4165.

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 litera-
ture and culture courses from Arabic M110, 150, M151, Comparative Literature 100, Islam-

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: Eleven courses, including (1) three selected from Hebrew 102A, 102B, 102C, 103A, 103B, 103C, 110A, 110B, 111A, 111B, 111C, 120, 125, 130, 135, C140 — students may substitute another upper division language (Judeo-Arabic, Judeo-Persian, Ladino, Yiddish) if they can demonstrate its integral role in their specific course of study; (2) two courses selected from Jewish Studies M182A through M182D, M184A, and (3) six elective courses selected from Hebrew or Jewish studies or from Ancient Near East M135, 162, English 111A, 111C, German 109, History 191F, Irish 130, 131, Political Science 121A, 132A, M132B, 164, Semitics 130, Study of Religion 120, Yiddish 101A, 101B, 101C, 102A, 102B, 102C, 121A, 121B, 121C, 130, 131A, 131B, 131C.

Students are encouraged to take a research tutorial within Jewish Studies 197 or 199. A maximum of two 197 or 199 courses (8 units total) may be applied toward the major.

Study in Israel

Students are encouraged to spend up to one year in Israel either to (1) study with an education abroad program or (2) study at an Israeli university. For information on studying in Israel, contact the Education Abroad Program, B300 Murphy Hall, (310) 825-4889.

Middle Eastern Studies B.A.

Preparation for the Major

Required: Two courses selected from Ancient Near East 10W, History 9D, Middle Eastern Studies 50A, M50B, 50C and demonstrated proficiency equivalent to level 3 at UCLA in one modern Middle Eastern language (Arabic, Armenian, Hebrew, Persian, Turkish) or through a departmental language placement examination. Students selecting ancient languages (including Akkadian, Aramaic, Coptic, Egyptian, Old or Middle Iranian, Sumerian, Syriac) are not required to take a modern elementary Middle Eastern language.

Transfer Students

Transfer applicants to the Middle Eastern Studies major with 90 or more units must complete the following introductory courses prior to admission to UCLA: one year of Arabic, Armenian, Hebrew, Persian, Turkish, or another modern middle Eastern language.

Refer to the UCLA Transfer Admission Guide 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 11 upper division courses as follows:

Required Core Courses: A total of six courses, including at least two courses from three of the following four areas:


Students may petition to substitute a core or elective course with a departmental independent study/directed research course (197, 198, or 199) as long as it covers a topic relevant to Middle Eastern studies. No more than two 197, 198, or 199 courses (8 to 10 units) may be applied toward the major.

Study Abroad

Students are encouraged to spend time abroad either to (1) study with an education abroad program or (2) work on a UCLA-affiliated archaeological excavation in the broader Middle East. For information on studying abroad, contact the Education Abroad Program, B300 Murphy Hall, (310) 825-4889; for UCLA-affiliated excavations, contact the departmental academic counselor at (310) 825-4165.

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, C104C, 213, C214, Comparative Literature 100, Gender Studies 285, Geography 187, History 105A, 105B, 105C, M106A, M106B, 108B, 111A, 111B, 111C, 200J, Islamics M110, 130, Middle Eastern Studies 200, 201, Political Science 132A, M132B, 157, 165, 245) may be applied. Other courses, including extra-departmental courses, may be applied with consent of the adviser.

A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor.

Each minor course must be taken for a letter grade, and students must have an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

**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 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 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.

A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor.

Each minor course must be taken for a letter grade, and students must have an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

**Hebrew and Jewish Studies Minor**

To enter the Hebrew and Jewish Studies minor, students must have an overall grade-point average of 2.0 or better, 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.

A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor.

Each minor course must be taken for a letter grade, and students must have an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

**Israel Studies Minor**

The Israel Studies minor is designed for students interested in adding a particular focus on Israel to their major. Comprised of coursework that serves to create a broad introductory foundation of familiarity with Israeli history, society, politics, and culture, the minor is appropriate for students from a wide range of majors, including Art, Comparative Literature, Film and Television, History, Jewish Studies, Middle Eastern Studies, Political Science, and Study of Religion.

To enter the minor, students must have an overall grade-point average of 2.0 or better, completed Middle Eastern Studies 50C or equivalent, and file a petition in 378 Humanities Building, (310) 825-4165.


A maximum of 4 graded units of special studies courses (197, 198, 199) approved by the department may be applied toward the minor.

A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor.

Each minor course must be taken for a letter grade, and students must have an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

**Near Eastern Languages and Cultures Minor**

TheNear 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.

A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor.

Each minor course must be taken for a letter grade, and students must have an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

**Graduate Study**

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website, http://grad.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 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, Syriac, and Ugaritic are listed under Semitics.)

**Lower Division Courses**

10W. Jerusalem: Holy City, (B) 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 art forms throughout history. Discussion of testimony of artifacts, architecture, and iconography in relation to written word. Study of creation of mythic Jerusalem through event and experience. Satirical Writing II requirement. Letter grading.

15. Women in World History. (5) Lecture, four hours; discussion, one hour. Examination of how feminine power confronts masculine dominance within complex social systems in ancient world. To gain new insight into female rulers and men to gain access to important men. Other women gained their position as regents and helpers of masculine kings who were too young to rule. Others denied their femininity in dress and manner, effectively and disingenuously pretending to be men so that their femininity would not be obstacle to political rule. Many women only gained throne at end of dynasties after male line ran out entirely, or in midst of civil war when patrilineal successions were in disarray. Women were sometimes only effective leaders left in drawn-out battles against imperial aggression. Women gained greater power and recognition in Sasanian period. Women’s power was compromised from outset. Examination of root causes and results of this political inequality. P/N or letter grading.

30. Science in Archaeology. (4) Lecture, three hours; discussion, one hour. Archaeology is rapidly developing due to ongoing introduction of new hardware, software, and information dissemination technology. It is a multidisciplinary field of study, combining its own research methods and technologies with elements from geology, history, ethnography, geography, material science, statistics, biology, biochemistry, medicine, and others, presenting options not only to obtain new scholarly insights, but also to provide integrated instruction in science, technology, engineering, and mathematics (STEM) skills. Use of archaeological data as problem-solving educational tool. Interpretation and application of mathematics during surveying, geology during ceramic analysis or geophysical research, biochemistry during archaeological residue analysis, or biology during zooarchaeological or palaeoethnobotanical research offers point of departure for instructors as well as motivation to students. P/N or letter grading.

Upper Division Courses

CM101A. Art and Architecture of Ancient Egypt, Predynastic to New Kingdom. (4) (Same as Art History M101A.) Lecture, three hours. Study of architecture, sculpture, painting, and minor arts during Predynastic to New Kingdom periods. May be repeated for credit with consent of instructor. Concurrently scheduled with course C267A. P/N or letter grading.

CM101B. Art and Architecture of Ancient Egypt, New Kingdom to Greco-Roman Period. (4) (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/N or letter grading.

CM101C. Ancient Egyptian Religion 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 Luxor), view of history, the most famous of which is the Temple of Karnak. Students will engage in an active exploration of the temples and their history, learning about their construction, function, and significance. P/N or letter grading.

CM103A. Chronological Discussion of Ancient Egyptian Art and Architecture, Predynastic to New Kingdom. (4) (Formerly numbered M103A.) Lecture, three hours; discussion, one hour (when scheduled). Examination of the development of ancient Egyptian art and architecture from the Predynastic Period to the New Kingdom period. P/N or letter grading.

CM103B. Ancient Egyptian Civilization, (4-4) (Same as History M103B.) Lecture, four hours; discussion, one hour. Focus on ancient Egyptian civilization from the Predynastic Period to the New Kingdom period. P/N or letter grading.

CM104A. Egyptian Language. (4) (Formerly numbered M104A.) (Same as History M104A.) Lecture, three hours; discussion, one hour (when scheduled). Focus on ancient Egyptian language and grammar, including their role in the development of the alphabetic script. P/N or letter grading.

CM104B. Sumerians. (4) (Formerly numbered M104B.) (Same as History M104B.) Lecture, three hours. Focus on ancient Sumerian civilization, including their role in the development of Mesopotamian civilization. P/N or letter grading.

CM105. Egyptian Religion and Sudan. (4) (Same as Anthropology M119E.) Lecture, two hours; laboratory, three hours. Focus on ancient Egypt and Sudan, with particular emphasis on the role of religion in ancient Egyptian society and the impact of religious practices on the daily lives of ancient Egyptians. P/N or letter grading.

M110A-M110B-M110C. Middle Egyptian Technical Literature. (5-5-5) Lecture, three hours; laboratory, one hour. Focus on Middle Egyptian technical literature in hieroglyphic transcription. Medical, veterinary, mathematical, and astronomical texts included. P/N or letter grading.

M110D. Assyrians. (4) (Formerly numbered M110D.) (Same as History M110D.) Lecture, three hours. Focus on ancient Assyrian civilization, including their role in the development of ancient Near Eastern civilization. P/N or letter grading.

M125A. Digital Cultural Mapping Core Course A: Place, Time, and Digital World. (4) Lecture, three hours; discussion, one hour. Focus on the use of digital cultural mapping technologies to understand and analyze cultural phenomena. P/N or letter grading.

M125B. Digital Cultural Mapping Core Course B: Google Earth, Geographic Information Systems, Hypercites, and Timelines. (4) (Same as Architecture and Urban Design M125B.) Lecture, three hours; discussion, one hour. Focus on the use of Google Earth and Geographic Information Systems to understand and analyze cultural phenomena. P/N or letter grading.

M125C. Digital Cultural Mapping Core Course C: Summer Research. (4) (Same as Architecture and Urban Design M125C.) Laboratory, three hours; fieldwork, one hour. Focus on the use of Google Earth and Geographic Information Systems to understand and analyze cultural phenomena. P/N or letter grading.

M130. Ancient Egyptian Religion. (5) (Formerly numbered M130.) (Same as Religion M132.) Lecture, three hours; discussion, one hour. Focus on the study of ancient Egyptian religion as a coherent system of beliefs and practices. P/N or letter grading.
of thought and sphere of action that once served as meaningful and relevant framework for understanding physical conditions and human life for inhabitants of Nile Valley. General principles as well as developments through time (circa 3000 B.C. to 300 C.E.). Topics include mythology, temple and cult, magic, and personal identity. P/N or letter grading.

M135. Religion in Ancient Israel. (4) (Formerly numbered 135.) (Same as Religion M135.) Lecture, three hours. Introductory survey of various ancient Israelite religious beliefs and practices, their origin, and development, with special attention to diversity of religious practice in ancient Israel and Canaan during 1st millennium B.C.E. P/N or letter grading.

140A-140B-140C. Elementary Sumerian. (4-4-4) Lecture, three hours. Requisites: Semitics 140A, 140B. Elementary grammar and reading of cuneiform inscriptions, letters, and administrative texts from Ur III period. P/N or letter grading.


150C. Mesopotamia; 150B. Egypt. Preparation: familiarity with Egyptian history. Survey of 3000 years of ancient Egyptian literature. Reading and understanding of texts in translation to study Egypt's intellectual history and trace transformations in its construction of cultural identity. Topics include invention of writing, autobiography, wisdom texts, narratives, royal instructions, 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 ancient Israel, with emphasis on human origins of agriculture and first cities. P/N or letter grading.

C163. Archaeology of Iran. (4) (Formerly numbered 163.) (Same as Religion M163.) Seminar, three hours; laboratory, one hour. Designed to introduce students to Iranian archaeology from prehistoric through Achaemenid times. Concurrently scheduled with course C259. P/N or letter grading.

C165. 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 C268. P/N or letter grading.

166. Art and Death in Ancient Egypt. (4) Lecture, four hours. Ways of death, burial, funerary ritual, and afterlife beliefs in ancient Egypt, as well as in ancient Near East and Nubia, with focus on ancient visual material, both cave and wall art. Architecture — from Predynastic to Roman periods. P/N or letter grading.

M167. Magic in Ancient World. (4) (Same as Classics M167.) Lecture, three hours; discussion, one hour (when scheduled). Requisite: Classics 10 or 20. Exploration of role of influencing natural course of events by occult means as practiced in ancient world at large. Coverage of beliefs in supernatural forces, rites aimed at controlling these forces effectively, and characteristics and social roles of ritual experts in various cultures of ancient world. Source material includes types of magical spells, literary texts about magic and magicians, and artifacts such as amulets and ritual implements.

M168. Introductory Hittite. (4) (Same as Indo-European Studies 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 morphological syntax, followed by readings of selected texts from variety of genres in translation. P/N or letter grading.

CM169. Introduction to Archaeological Sciences. (4) (Same as Anthropology CM110G.) Lecture, three hours. Basic understanding of twenty-first century methods and techniques throughout field of archaeology to implement to and appreciate and evaluate results of their use by others who have embedded them in their scholarly publications or theoretical models. Systematic instruction in digital data management and mining, scientific analysis of materials (including geological and biochemical techniques), and visual presentation of data and research results (ranging from simple graphs to virtual reality). Concurrently scheduled with course CM269. P/N or letter grading.

M170. Introduction to Biblical Studies. (4) (Formerly numbered 170G.) (Same as Religion M172.) Lecture, three hours. Knowledge of original languages not required. Bible (Old and New Testaments) as book, Canon, text, and versions, Linguistic, literary, historical, and religious approaches to Bible study. Study of history of interpretation from antiquity to present. P/N or letter grading.

C177. Variable Topics in Ancient Near East. (4) Lecture, three hours; discussion, one hour. Various topics; consult Schedule of Classes for topics to be offered in specific term. Concurrently scheduled with course C277. P/N or letter grading.

M185D. Religions of Ancient Near East. (4) (Same as History M185D and Religion M185D) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Main polytheistic systems of ancient Near East, with emphasis on Mesopotamian and Syrian culture, and the religion of ancient Israel: varying concepts of divinity, hierarchies of gods, prayer and cult, magic, wisdom, and moral conduct. P/N or letter grading.

197. Individual Studies in Ancient Near East. (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/N or letter grading.

199. Directed Research or Senior Project in Ancient Near East. (2 to 4) Tutorial, one hour. Limited to juniors/seniors. Directed individual research or investigation under guidance of faculty mentor. Culminating paper or project required. May be repeated for credit. Individual contract required. P/N or letter grading.

Graduate Courses

M201. Archaeological Research Design. (4) (Same as Archaeology M201C.) Seminar, three hours. Requisites: Archaeology 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 grant, paper 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.

M208. Topics in Ancient Iranian History. (4) (Same as History M208.) Lecture, three hours. Varying topics on Elamite, Achaemenid, Arsacid, and Sassanian 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. Introduction to grammar and vocabulary of hieroglyphic texts from Greco-Roman temples. Text readings 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. (4-4) Lecture, three hours. Requisite: course 211C. 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.

C223A-C223B. Coptic. (5-5) Lecture, three hours. Introduction to Coptic, final phase of Egyptian language, which is attested in writing from circa 300 to 1400 CE. Concurrently scheduled with courses C123A-C123B. S/U or letter grading. C223A. Devoted to learning Coptic alphabet, grammar, and vocabulary (Sahidic dialect), with particular emphasis on historical linguistics. C223B. Requisite: course C223A. Introduction to variety of Coptic textual genres, from hagiographies to homilies, magical spells, private letters, legal contracts, and Gnostic Gospels found in Nag Hammadi. Readings in texts in dialects other than Sahidic (Borainic, Sahidic Dialect, etc.), and its place in literature and scriptural traditions.

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.

M250. Seminar: Ancient Mesopotamia. (4) (Same as History M250.) Seminars on selected topics in historical linguistics of Sumerian script, ancient Near Eastern textual topics on political, social, and intellectual history of ancient Mesopotamia. May be repeated for credit. S/U or letter grading.

C259. Archaeology of Iran. (4) Lecture, three hours. Designed to introduce students to Iranian archaeology from prehistoric through Achaemenid times. Concurrently scheduled with course C163. 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 Heeramananki 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 Delta, Nile Valley, desert sites, wadas, oases, and border regions. Archaeology and decoration of temples and tombs, statuary and monuments, settlement and use history, text translation of appropriate documents, including stelae, 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 histo-
ry and agenda, museology, and exhibition history. May be repeated for credit with consent of instructor. S/U or letter grading.

M265. Depositional History and Stratigraphic Analysis. (4) (Same as Archaeology M265.) Lecture, two hours. Theoretical understanding of depositional processes ("laws") which lead to site formation and of stratigraphic procedures used in the recovery of embedded cultural materials. Study of issues covered in literature, with specific test cases from actual excavations and site reports. Coverage of theoretical implications and such discourses as those concerning the portrayal with help of specialists. S/U or letter grading.

C266. Egyptian Archaeology. (4) Seminar, three hours. Opportunity to research aspects of topics in ancient Egyptian archaeology. Topics vary each year. May be repeated for credit. Concurrently scheduled with course C165. S/U or letter grading.

C267A. Art and Architecture of Ancient Egypt, Predynastic 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.

CM269. 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 appreciate and evaluate results of their use by others who have embodied them in their scholarly publications or theoretical models. Systematic instruction in digital data management and mining, scientific analysis of materials (including geological and biochemical techniques), and visual presentation of data and research results (ranging from simple graphs to virtual reality). Concurrently scheduled with course CM169. S/U or letter grading.


C277. Variable Topics in Ancient Near East. (4) Lecture, three hours; discussion, one hour. Variable topics; consult Schedule of Classes for topics to be offered in specific terms. 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.


Arabic

Lower Division Courses

1A-B. Elementary Standard Arabic. (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 Arabic. Introduction to formal Arabic (modern standard Arabic), including listening, speaking, reading, and writing. P/NP or letter grading.

8. Elementary Standard Arabic: Intensive. (15) Lecture, 10 hours. Not open to students who have learned, from whatever source, enough Arabic to qualify for more advanced courses. Intensive course equivalent to courses 1A, 1B, and 1C. Introduction to fundamentals of standard Arabic, including pronunciation, grammar, and Arabic script, with emphasis on basic language skills, speaking, listening comprehension, reading, and writing. Offered in summer only. P/NP or letter grading.

Upper Division Courses

102A-102B-102C. Intermediate Standard Arabic. (5-5-5) Lecture, six hours. Requisite: course 1C. Course 102A is a requisite to 102B, which is a requisite to 102C. Not open to students who have learned, from whatever source, enough Arabic to qualify for more advanced courses. Intermediate formal Arabic, including listening, speaking, reading, and writing. P/NP or letter grading.

103A-103B-103C. Advanced Arabic. (4-4-4) Lecture, four hours. Requisites: courses 102A, 102B, 102C. Not open to students who have learned, from whatever source, enough Arabic to qualify for more advanced courses. Advanced formal Arabic, including grammar, composition, and readings from classical and modern texts. Letter grading.

105. Introduction to Qur'anic and Islamic Arabic. (4) Lecture, three hours. Requisites: courses 1A, 1B, 1C. Introduction to Arabic used in Qur'an, Hadith (traditions of Prophet Muhammad), and early Islamic literature (biographies, hadith and historical narratives). P/NP or letter grading.

M106. Qur'an. (4) (Same as Religion M108.) Lecture, three hours. How Qur'an as scripture shapes Muslim doctrine, ritual, and culture, and how throughout history Muslims have interpreted and applied Qur'anic doctrines and prescriptions. Critical evaluation and analysis of contemporary discourses on Islam. Letter grading.

M107. Islam in West. (5) (Same as Islamics M107 and Religion M107.) Lecture, three hours; discussion, one hour. Acquisition of understanding of basic doctrinal practices of Islam, Survey of history of Islam in West, with focus on U.S. and France. Analysis of issues relevant to growth and development of selected Muslim communities in West. Exposure to diverse expressions of Islam through independent research on Muslim communities and institutions in U.S. Development of strong analytical writing and speaking skills. P/NP or letter grading.

108. Summer Intensive Intermediate Arabic. (12) Lecture, and discussion, 20 hours. Enforced prerequisite: course 1C. Not open to students who have learned, from whatever source, enough Arabic to qualify for more advanced courses. Intensive course equivalent to courses 102A, 102B, and 102C. Intermediate formal Arabic, including listening, speaking, reading, and writing. Offered in summer only. P/NP or letter grading.

M110. Thousand and One Nights/Alf Layla Wa Layla. (4) (Same as Comparative Literature M110.) Lecture, three hours. Knowledge of Arabic not required. Since its appearance in Europe in 1704, Thousand and One Nights is most well-known work of Arabic literature in West. Examination of cycle of tales most 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, Barh, Poe, and Walt Disney). P/NP or letter grading.

111A-111B-111C. Elementary Spoken Egyptian Arabic. (4-4-4) Lecture, three hours. Enforced prerequisite: course 1C or 8. Course 111A is an enforced requisite to 111B, which is an 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.

111S. Summer Intensive Elementary Egyptian Arabic. (4) Lecture, three hours. Knowledge of Arabic not required; not suitable for heritage speakers. Introduction to spoken Arabic dialect of Egypt. Training in listening, speaking, and reading. P/NP or letter grading.

112A-112B-112C. Advanced Spoken Egyptian Arabic. (4-4-4) Lecture, three hours. Study of Egyptian component of Arabic for heritage speakers or students who have completed courses 1A, 1B, 1C. P/NP or letter grading.

115. Studies in Arabic Dialectology. (4) Lecture, three hours. Introduction to one spoken dialect of Arabic with emphasis on spoken language comprehension. Dialects vary from year to year based on student interest and instructor availability and may include Iraqi, Levantine, North African, or Gulf Arabic. May be repeated for credit.

116A-116B-116C. Elementary Iraqi Arabic. (5-5-5) Lecture, five hours. Course 116A is requisite to 116B, which is a requisite to 116C. Introduction to dialect of Arabic spoken in contemporary Iraq, with emphasis on functional proficiency and production of sounds of Iraqi Arabic and basic vocabulary, grammar, idiomatic expressions, and relevant cultural background through dialogues and other conversational exercises. P/NP or letter grading.

120. Islamic Texts. (4) Lecture, four hours. Requisite: course 103C. Readings from Qur'an, Tafsir, Hadith, Fiqh. May be repeated for credit. Letter grading.

M123. Oral Literature and Performance of Arab Women. (4) (Same as Comparative Literature M123.) Lecture, three hours. Knowledge of Arabic not required. Introduction to study of living oral traditions of troubadours, storytellers, oral poets, and performers in Arabic-speaking Middle East. P/NP or letter grading.

M130. 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.


C141. Modern Arabic Literature. (4) (Formerly numbered 141.) Lecture, three hours. Requisite: course 102C. Conducted in English and Arabic, with all required readings in original Arabic only. Readings in modern Arabic literature, variably organized across or around particular trends, genres, topics, canonical authors, regional, or national literatures, mixing thematic and formal analyses of literary and critical texts and making use of film, video-clip, and song in approaching literary culture. May be repeated for credit. Concurrently scheduled with course C241. Letter grading.

142. Arabic Media. (4) Lecture, four hours. Requisite: course 103A. Development of mass media and oral production of Arabic press and broadcasting. Activities include monitoring current materials via Internet; transcribing, translating, and summarizing; writing original reports in Arabic and oral presentations in Arabic. May be repeated for credit. P/NP or letter grading.

M148. Contemporary Arab Film and Song. (4) (Same as Comparative Literature 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, as well as topics such as the status of gender, the representation of democracy or human rights or censorship, reception, and resistance. Possible examination of various national cinemas such as Tunisian, Egyptian, Moroccan, Arabian. Various musical genres such as Rai, Mizound, and Hip-hop also examined in relation to emergence not only of national cinemas, national music industries, and iconic stars but also of video clip, satellite TV production of sounds of Arabic and basic vocabulary, grammar, idiomatic expressions, and relevant cultural background through dialogues and other conversational exercises. 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 Arabic, rise of Islam, and major themes of Southwest Asian history.
along with significant figures and moments in literature and culture of premodern period. Consideration of cultural responses to Arabic tradition. Credit, no degree. P/NP or letter grading.

M151. Modern Arabic Literature in English. (4) (Same as Comparative Literature M167.) Lecture, three hours. Designed for upper division literature majors. Topics include constructions of gender in modern 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 reception, exorcism, translation, and marketing. Genres may include prison narratives; novel of terror; memoirs by women and/or by refugees and exiles; 19th- and 20th-century Arabic poetry; literary 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.

M155. Al-Andalus: Literature of Islamic Spain. (4) (Same as Comparative Literature M119.) 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 and its influence in European life and letters. P/NP or letter grading.

M171. Culture Area of Maghrib (North Africa). (4) (Same as Anthropology M171P and History M180C.) Lecture, three hours. Designed for juniors/seniors. Introduction to North Africa, especially Morocco, Algeria, Tunisia, and Libya, also known as Maghrib or Tamarzagh. Topics include changing notions of personal, tribal, ethnic, linguistic and religious identities; colonialism; gender and legal rights, changing repre- sentations of Islam, and religions in region’s public spaces. P/NP or letter grading.

180. Linguistic Analysis of Arabic. (4) Lecture, four hours. Required: course 102C. Linguistic description of Arabic in both its modern standard and dialect forms. Introduction to linguistic analysis of Arabic phonology, morphology, and syntax and to linguists’ approaches to specific problems posed by Arabic grammar and dialectology. Letter grading.

181. Translating Arabic. (4) Seminar, three hours. Preparation: advanced proficiency in English and Arabic (at least three years of Arabic instruction or equivalent) and reading and writing in Arabic. Training of students in methodol- ogy of translation from Arabic into English, with focus on producing accurate and readable English versions of Arabic texts. Choice of fields, with emphasis on writing and reading translated Arabic texts, with review of linguistic and cultural difficulties that arise in course of translation. Texts may include classical Arabic literature (religion, historiography), modern writing (litera- ture, media), and spoken Arabic (television, radio), based on student interest. Letter grading.

188FL. Special Studies: Readings in Arabic. (2) Seminar, two hours. Required: course 102C. Students must be concurrently enrolled in affiliated main course. Primary readings and additional work in Ara- bic to enrich and augment work assigned in main course. 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. Assigned reading and tangible evidence of mastery of subject mat- ter required. May be repeated for credit. Individual contract required. P/NP or letter grading.

199. Directed Research or Senior Project in Ara- bican. (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

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 Ahi al-suunna wa-l-jama’a, Shi’a, Mu’tazila, and Sufis. Preparation: student to read first author and his works, multiple authors and their works, or specific topic with representative readings from various schools. Exploration of secondary litera- ture in Arabic and other languages. May be repeated for credit. S/U or letter grading.

M231. Texts in Judeo-Arabic. (4) (Same as Hebrew M231.) Seminar, three hours. Taught in English and Arabic. Reading in Judeo-Arabic texts by Maj- monides (medieval religion, medicine, philosophy) and more recent texts in Judeo-Arabic dialects of Iraq and Egypt, with discussion of grammar and de- visione of norms of classical Arabic. S/U or letter grading.

240A. Seminar: Arab Historians. (4) Seminar, three hours. Introduction to very large body of literature on medieval Arabic and Jewish historians. Readings in Arabic that represent cross-section of Islamic historical writ- ings, including Ibn Ishaq’s Sira, Waqidi’s Maghazi, Al-Baladuri’s Futu’ah, Tabari’s Ta’rikh, digests of Ya’qubi and al-Tabari, and social history of Islam and Ma- grophi’s topography. Historians studied either to deter- mine their reliability as sources or their view of history and its theoretical foundations. Exploration of sourc- es, 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 geo- graphical writings distributed over number of disci- plines and various aspects of geography, such as Su- rat-al-ard, Kitab al-Buldan, al-Masalik wa’l-mamalik, and travel accounts. May be repeated for credit. S/U or letter grading.

250. Seminar: Premodern Arabic Literature. (4) Seminar, three hours. Taught in English and Arabic. Discussion of literature and oratory, Qur’an, Umayyad and Abbasid poetry and literary prose, Hadith and Fiqh, historiography, bi- ography, geography, medicine, mathematics, theolog- ical, asceticism, and mysticism. May be repeated for maximum of 24 units. S/U or letter grading.

251. Seminar: Modern Arabic Literature. (4) Semi- nar, three hours; discussion, one hour. Required: course 102C. Selected topics in modern and contem- porary Arabic prose and poetry. May be repeated for credit. Letter grading.

M255. Literatures and Cultures of Maghreb. (4) (Same as Comparative Literature M251.) Seminar, three hours. Limited to graduate students. Examina- tion of traditionally diverse literatures of Maghreb in their multiple dimensions; Arab, Jewish, Christian, and other language and gender politics, religious and cultural formations, Pan-Arabism and postcolonial nationhood, Third- World literary and cultural development, modernity and globalization, immigration and citizenship, soccer in- dustry and Rai music, mass media and Star Academy, Maghreb, and more. Readings of literatures in English and in English and in Spanish. Preparation: students with knowledge in languages (particularly Arabic and French) in conjunc- tion with theories of language and linguistic pluralism, cultural translation, deconstruction, and host of other relevant theories of gender, globalization, and postco- lonial modernity. May be repeated for credit. S/U or letter grading.

275. Encountering Arabic Manuscripts: Introduc- tion to Arabic Paleography and Critical Edition of Manuscripts. (4) Lecture, three hours; discussion, one hour. Requisite: course 103C. Introduction to Ara- bic paleography and hands-on editing of medi- eval manuscripts with critical apparatus and stemma. During past decades enormous number of previously unknown Arabic manuscripts have been discovered. Whether from range of manuscripts published in editions of varying quality, equally large num- ber of manuscripts remain unpublished. UCLA has outstanding collections of Near Eastern manuscripts in Jewish, Arabic, Persian, and primarily in fields of medicine, literature, philology, theology, law, and history. It is rich in works related to studies of theologians and scholars at different centers of learn- ing in Iran during Safavid period noted for works of Shite theology, Islamic sciences, and philosophy. Course opens this treasure to graduate students interested in editing and/or translating manuscripts. S/U or letter grading.

M285. Modern Arabic Thought. (4) (Same as Com- parative Literature M288.) Seminar, three hours. While much has been written and said about resurgence and spread of political Islam after collapse of ideology of secular nationalism and postrevolutionary/postcolonial moment, little has been devoted to less sensational topic of modern Arabic thought despite unmistakable proliferation of critical output produced by Arab think- ers and artists in aftermath of 1967. Course address- es and redresses this glaring imbalance by consider- ing new cultural material — literary, critical, philosoph- ical, artistic, and journalistic — produced before and after al-Nahda but mostly before and after 1967 and fosters insightful approaches to unlikely coexistence in Arab contemporaneity of ever-deepening and gener- alized crisis and of steady and consolidated develop- ment (if not effervescence) of cultural and artistic production. S/U or letter grading.

496. Arabic Language Pedagogy Course. (2) Semi- nar, three hours. Taught in English and Arabic. Discus- sion of multiple topics pertaining to Arabic language teaching and learning. Content designed to address Arabic language pedagogy, with emphasis on practi- cal issues and applications of different language teaching methodologies. Activities include lectures, classroom observations, and teaching demonstra- tions. Participants collaborate on projects that investi- gate issues related to language skills, such as listening, speaking, reading, and writ- ing. S/U grading.

599. Ph.D. Dissertation Research and Preparation. (2 to 8) Tutorial, to be arranged. May be repeated for credit. S/U or letter grading.

Armenian

Lower Division Courses

1A-1B-1C. Elementary Modern Western Armenian. (5-5-5) (Formerly numbered 101A-101B-101C.) Lecture, five hours. Course 1A is recommended requisite to 1B, which is recommended requisite to 1C. Students with knowledge of Armenian should contact in- structor to determine appropriate enrollment level. Ar- menian grammar, conversation, and exercises. P/NP or letter grading.

4A-4B-4C. Elementary Modern Eastern Armenian. (5-5-5) (Formerly numbered 104A-104B-104C.) Lecture, five hours. Course 4A is recommended requisite to 4B, which is recommended requisite to 4C. Students with knowledge of Armenian should contact instructor to determine appropriate enroll- ment level. Designed for students with little or no prior
knowledge of Eastern Armenian, official idiom of Rep- 
public of Armenia. Introduction to basics of grammar 
and conversation. P/NP or letter grading.

Upper Division Courses

102A-102B-102C. Intermediate Modern Western Arme-
nian. (5-5-5) Lecture, five hours. Recommended 
requisite: course 1C. Students with knowledge of 
Eastern or Western Armenian (from elementary 
or high school) should contact instructor to determine 
appropriate enrollment level. Reading of selected 
texts, composition, and conversation. Each course 
may be taken independently for credit. P/NP or letter 
grading.

103A-103B-103C. Advanced Modern Western 
Armenian. (4-4-4) Lecture, four hours. Recommended 
requisite: course 102C. Course 103A is recommend-
ed 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 
entrance level. Continuing introduction to Armenian 
grammar, with greater attention to read-
grading.

150A-150B. Survey of Armenian Literature in En-
lish. (4-4) Lecture, three hours. Knowledge of Arme-
nian not required. Each course may be taken inde-
pendently for credit. P/NP or letter grading.

151A. Armenian Literature and Canon Forma-
tion. (4) Lecture, four hours. Discussion of fundamen-
tal themes and genres around which Armenian literary 
tradition evolved and modalities by which this has 
been transformed in course of last two centuries as 
result of exposure to European thought and expres-
sive forms. Concurrently scheduled with course 
C251. P/NP or letter grading.

152. Modern Armenian Drama as Vehicle for So-
cial Critique. (4) Lecture, four hours. Readings of se-
plected plays from 1668 to 1992 from three main 
genres of tragedy, comedy, and serious drama and 
featuring works by most significant Armenian play-
wrights, with focus on their role as commentators on 
contemporary mores and as agents for social reform. 
Concurrently scheduled with course C252. Letter 
grading.

153. Art, Politics, and Nationalism in Modern Ar-
menian Studies. May be repeated for maximum of 16 
credits. An interdisciplinary seminar with focus on 
trends of new literary expression that developed in 
new literary formats and ideological contexts, as art 
for art's sake, etc. Exploration of contrasting aesthetics 
implicit in these differing interpreta-
tions. Concurrently scheduled with course 
C253. P/NP or letter grading.

155. Issues in Armenian American Literature and 
Culture. (4) Lecture, four hours. Preparation: reading 
novels of modern Eastern and Western Arme-
nian. Theoretically informed exploration of some of 
most salient questions related to Armenian American 
community as reflected in its literature and other cul-
tural expressions in interaction with its multicultural 
ambience. Concurrently scheduled with course 
C255. Letter grading.

160A-160B. Armenian Literature of 19th and 20th 
Centuries. (4-4) Lecture, three hours. Requisites: 
courses 102A, 102B, 102C. Reading of texts and dis-
cussion of various genres of modern Armenian litera-
ture within context of Armenian cultural renaissance. 
P/NP or letter grading.

161. Armenian Film and Culture. (5) Lecture 
six hours. Requisite: course 1C or 4C. Overview of de-
velopment of Armenian cinematography from first talkie 
to present, with focus on work of most seminal direc-
tors from Armenian Republic, as well as various voic-
es from worldwide diaspora. Concurrently scheduled 
with course C266. P/NP or letter grading.

170. Armenian Poetry, 1880 to 1930. (4) Lecture, 
three hours. Requisite: course 1C or 4C. Examination 
of process behind creation of range and variety of poe-
etic expression that developed in new literary formats 
and genres of which became standard modern Eastern 
and Western Armenian language in second half of 
19th century. Special attention to crafting of central 
practitioners’ individual voice, with particular consid-
eration to poetic expression and literary move 
mement under impact of modernism, and employ 
ment of poetic structure and form as methods for express 
ion of deeper philosophical values. All texts read in 
original language. P/NP or letter grading.

188. Variable Topics in Armenian. (4) Lecture, 
four hours. Departmentally sponsored experimental or 
temporary courses, such as seminars taught by visiting 
faculty members. May be repeated for credit with top-
ic change. P/NP or letter grading.

197. Individual Studies in Armenian. (2 to 4) Tutori-
al, one hour. Limited to juniors/seniors. Individual 
intensive study, with scheduled meetings to be ar-
ranged between faculty member and student. 
Achieved and tangible evidence of mastery of 
subject matter required. May be repeated for credit. 
Individual contract required. P/NP or letter grade.

199. Directed Research or Senior Project in Arme-
nian. (2 to 4) Tutorial, one hour. Limited to juniors/se-
niors. Supervised individual research or investigation 
under guidance of faculty mentor. Culminating paper 
or project required. May be repeated for credit. Indi-
vidual contract required. P/NP or letter grading.

Graduate Courses

207. Armenian Intellectual History. (4) Lecture, 
three hours. Intellectual and cultural trends reflected 
in Armenian literature, history, religious and 
philosophical thought. S/U or letter grading.

210. History of Armenian Language. (4) Lecture, 
three hours. Development of Armenian language in 
it various stages: classical, middle, and modern. S/U or 
letter grading.

220. Armenian Literature of Golden Age (A.D. 5th 
Century). (4) Lecture, three hours. Readings of texts 
discussion of literary genres; original works and 
those translated from Greek and Syriac. S/U or letter grading.

(4-4-4) Lecture, three hours. Course 230A is requisite 
to 230B, which is requisite to 230C. Introduction to 
grammar of classical literary language (6th to mid-
19th century) and guided readings in narrative prose 
texts. Letter grading.

231A-231B-231C. Intermediate Classical Arme-
nian. (4-4-4) Lecture, three hours. Requisite: course 
230C. Intensive review of grammar and reading of se-
lect prose and poetic texts. Each course may be taken 
individually for credit. Letter grading.

(4-4-4) Lecture, three hours. Requisite: course 231A 
or 231B or 231C. In-depth exploration and linguistic anal-
ysis of texts related to Philhellenic School of 6th to 8th 
century and related works up to 19th century. Each 
course may be taken independently for credit. Letter 
grading.

250A-250B. Seminars: Armenian Literature. (4-4) 
Seminars, three hours. Selected topics from various 
periods of Armenian literature. May be repeated for 
credit. S/U or letter grading.

251. Armenian Literature and Canon Formation. 
(4) Lecture, four hours. Discussion of fundamental 
themes and genres around which Armenian literary 
tradition evolved and modalities by which it has 
been transformed in course of last two centuries as 
result of exposure to European thought and expres-
sive forms. Concurrently scheduled with course 
C151. S/U or letter grading.

C251. Modern Armenian Drama as Vehicle for So-
cial Critique. (4) Lecture, four hours. Readings of se-
plected plays from 1668 to 1992 from three main 
genres of tragedy, comedy, and serious drama and 
featuring works by most significant Armenian play-
wrights, with focus on their role as commentators on 
contemporary mores and as agents for social reform. 
Concurrently scheduled with course C152. Letter 
grading.

C252. Art, Politics, and Nationalism in Modern Ar-
menian Literature. (4) Lecture, four hours. Examina-
tion 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.

Graduate Courses

207. Armenian Intellectual History. (4) Lecture, 
three hours. Intellectual and cultural trends reflected 
in Armenian literature, history, religious and 
philosophical thought. S/U or letter grading.

210. History of Armenian Language. (4) Lecture, 
three hours. Development of Armenian language in 
it various stages: classical, middle, and modern. S/U or 
letter grading.

220. Armenian Literature of Golden Age (A.D. 5th 
Century). (4) Lecture, three hours. Readings of texts 
discussion of literary genres; original works and 
those translated from Greek and Syriac. S/U or letter grading.

(4-4-4) Lecture, three hours. Course 230A is requisite 
to 230B, which is requisite to 230C. Introduction to 
grammar of classical literary language (6th to mid-
19th century) and guided readings in narrative prose 
texts. Letter grading.

231A-231B-231C. Intermediate Classical Arme-
nian. (4-4-4) Lecture, three hours. Requisite: course 
230C. Intensive review of grammar and reading of se-
lect prose and poetic texts. Each course may be taken 
individually for credit. Letter grading.

(4-4-4) Lecture, three hours. Requisite: course 231A 
or 231B or 231C. In-depth exploration and linguistic anal-
ysis of texts related to Philhellenic School of 6th to 8th 
century and related works up to 19th century. Each 
course may be taken independently for credit. Letter 
grading.

250A-250B. Seminars: Armenian Literature. (4-4) 
Seminars, three hours. Selected topics from various 
periods of Armenian literature. May be repeated for 
credit. S/U or letter grading.

C251. Modern Armenian Drama as Vehicle for So-
cial Critique. (4) Lecture, four hours. Readings of se-
plected plays from 1668 to 1992 from three main 
genres of tragedy, comedy, and serious drama and 
featuring works by most significant Armenian play-
wrights, with focus on their role as commentators on 
contemporary mores and as agents for social reform. 
Concurrently scheduled with course C152. Letter 
grading.

C252. Art, Politics, and Nationalism in Modern Ar-
menian Literature. (4) Lecture, four hours. Examina-
tion 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.
225. Issues in Armenian American Literature and Culture. (4) Lecture, four hours. Preparation: reading knowledge of modern Eastern and Western Armenian. Theoretically informed exploration of some of the most salient questions related to Armenian American community as reflected in its literature and other cultural artifacts in interaction with its pluralistic American audience. Concurrently scheduled with course C155. Letter grading.

226. Armenian Film and Culture. (5) Lecture, six hours. Requirement: course 1C or 4C, Overview of development of cinematography from first take to present, with focus on work of most seminal directors from Armenian Republic, as well as various voices from worldwide diaspora. Concurrently scheduled with courses C165. S/U or letter grading.

290. Seminar: Armenian Paleography. (4) Seminar, three hours. Discussion of variety of Armenian scripts and training in use of manuscripts, 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. Berber. (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. P/NP or letter grading.

8. Elementary Hebrew: Intensive. (1B) Lecture, 10 hours; discussion, 10 hours. Intensive course equivalent to courses 1A, 1B, and 1C. Introduction to modern Hebrew, including listening, speaking, reading, and writing. Offered in summer only. P/NP or letter grading.

Upper Division Courses

102A-102B-102C. Intermediate Hebrew. (5-5-5) Lecture, five hours. Requirement: course 1C. Course 102A is requisite to 102B, 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. Requirement: courses 102A, 102B, 102C. Students with prior knowledge of Hebrew who did not take courses 102A, 102B, and 102C may contact instructor to determine appropriate enrollment level. Designed for students with intermediate speaking fluency and reading abilities in Hebrew. Introduction to modern Hebrew literary texts. P/NP or letter grading.


110C. Readings in Biblical Hebrew. (4) Lecture, three hours. Requirement: courses 110A, 110B. Continuation of course 110B. Reading of prophetic texts from the 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 Aramaic, Standard, and Late periods. Increased understanding of Hebrew verbal system, including different verbal processes, their morphology, and syntactic function in biblical Hebrew prose. P/NP or letter grading.

111A. Israel Society through Hebrew Song and Video. (4) Lecture, three hours; laboratory, one hour. Requirement: course 1C. Use of contemporary Israeli song and video to explore Israeli collective imagination and various Israeli sociocultural issues to familiarize students with different aspects of Israeli daily life and popular culture, while teaching them multiple 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. Requirement: 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, audio, and print. P/NP or letter grading.

112. Readings in Modern Scholarly Hebrew. (2) Seminar, two hours. Requirement: course 102C. In-depth reading and discussion of selected scholarly articles in modern Hebrew literature on various disciplines: Bible study, Jewish history and folklore, sociology, and literary criticism. Development of student proficiency in vocabulary, terminology, and ideas in these fields while enhancing comprehension of complex syntactical structures in Hebrew. May be repeated for credit. P/NP or letter grading.

M113. Contemporary Israeli Short Stories/Novellas and Films in English. (5) Formerly numbered 113. (Same as Jewish Studies M113) Lecture, three hours; laboratory, two hours. Exploration of Israeli short stories/novellas and films (translated into English) written since mid-1980s that use, each to varying degree, postmodernist techniques to undermine premoni- dion of modernist-Zionist narrative. Reading and reexamination of Israeli condition and Zionist conditional and skepticism about legitimacy of meta-narratives to redefine Israeli identity and subvert its underpinning formative myths. They simultaneously display loss of faith in representative dimenson of language, including ability of texts to present to its hidden meaning. Using periphery dis- courses, these texts strive to change modernist aesthetic and power paradigm. P/NP or letter grading.


125. Hebrew Bible with Medieval Commentaries. (4) Lecture, three hours. Requirement: course 103C. Hebrew Bible with the commentaries of Rashi, Ibn Ezra, and/or Nahmanides. May be repeated for maximum of 16 units. Letter grading.

130. Rabbinic Texts. (4) Lecture, three hours. Requirement: courses 103A, 103B, 103C. Readings in Major Rabbinic works. May be repeated for credit.


C140. Modern Hebrew Poetry and Prose. (4) Lecture, three hours. Requirement: 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.

160. Hebrew Essay. (4) Lecture, three hours. Requirement: courses 103A, 103B, 103C. Hebrew essay from its rise in Europe in the late 18th century to contemporary Israeli essay. Study of literary, political, philo- sophical, and scholarly essay. May be repeated for credit.

170. Dead Sea Scrolls. (4) Lecture, three hours. Requirement: course 110C. Readings in Hebrew scrolls from Dead Sea, with focus on grammar, paleography, and biblical interpretation in Dead Sea Scrolls. May be repeated for credit. P/NP or letter grading.

180A-180B. Survey of Hebrew Grammar. (4-4) Lecture, three hours. Requirement: courses 102A, 102B, 102C. Descriptive and comparative study 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 expansion in Israel Hebrew, traditional pronunciation of Hebrew by various Jewish communities, Hebrew contribution to other Jewish languages (Yiddish, Ladino, Judeo-Arabic). P/NP or letter grading.

188FL. Special Studies: Readings in Hebrew. (2) Seminar, two hours. Requirement: course 102C. Students must be concurrently enrolled in an affiliated main course. Primary readings and advanced training in Hebrew. Additional work in enrich and augment work assigned in main course, including reading, writing, and other exercises in Hebrew. P/NP or letter grading.

197. Individual Studies in Hebrew. (2 to 4) Tutorial, one hour. Limited to juniors/seniors. Individual intensive study, with scheduled meetings to be arranged between faculty member and student. Assigned reading and tangible evidence of mastery of subject matter required. May be repeated for credit. Individual contract required. P/NP or letter grading.

199. Directed Research or Senior Project in Hebrew. (2 to 4) Tutorial, one hour. Limited to juniors/senior. Supervised individual research or investigation under guidance of faculty mentor. Culminating paper or project required. May be repeated for credit. Individual contract required. P/NP or letter grading.

Graduate Courses


225. Studies in Dead Sea Scrolls. (2 or 4) Seminar, three hours. Requirement: course 120. Critical study of Dead Sea Scrolls, with attention to history of biblical interpretation 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.


235. Hebrew Literature of Second Temple Period. (4) Seminar, three hours. Designed for students who have basic language skills and capacities necessary for reading Biblical Hebrew or Rabbinic Hebrew. Reading, analysis, and interpretation of Hebrew litera-
ture composed during Second Temple period. Relevant sources include Chronicles, Ezra-Nehemiah, Ecclesiastes, Ben Sira, Daniel, Dead Sea Scrolls, and other documents from Judean desert, and various apocrypha and pseudepigrapha. Special attention to historical development of Hebrew language and literature in relation to both earlier biblical sources, styles, grammar, and vocabulary, to subsequent Rabbinic writings. Course builds following skills: reading unpointed texts, mastering distinctive elements of vocabularian, idiom, 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 major Hebrew writers of past 100 years. May be repeated for credit. Concurrently scheduled with course C140. Letter grading.


596. Directed Individual Study. (2 to 8) Tutorial, to be arranged. May be repeated for credit. S/U or letter grading.


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 basic 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 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, focus on fabrication of major philosophical themes in ontology, epistemology, psychology, and cosmology through texts, with study in detail, P/NP or letter grading.

M105A-M105B-M105C. Baha’i Faith in Iran. (4-4-4) Seminar, three hours. Readings in English. Each course may be taken independently for credit. P/NP or letter grading.


M110A-M110B-M110C. Islamic 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 rise of Elam to end of Sassanian dynasty — Elamite civilization and Mede, Achae- menid, Arasid, 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 basic grammar of Kuridish (Sorani). Graded readings, translation, composition (level one), conversation (levels one and two). P/NP or letter grading.

M115A-M115B-M115C. Elementary Azeri. (4-4-4) (Same as Turkic Languages M115A-M115B-M115C.) Lecture, five hours. Knowledge of Russian, Turkish, and Iranian helpful. Grammatical competence at elementary level; knowledge of basic facts of Azeri grammar; reading comprehension with help of dictionary; ability to write simple compositions; basic conversational skill.

120. Comparative Study of Six Major Persian Poets. (4) Lecture, two hours; discussion, one hour. Preparation: knowledge of Persian. 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.

130. Intellectual History of Jews of Persia. (4) Lecture, three hours. Readings in English. Introduction to intellectual history of Jews in Persia by highlighting select areas of Judeo-Persian studies and focusing on various authors and their work. P/NP or letter grading.

131. Introduction to Judeo-Persian Language and Culture. (4) Lecture, three hours. Preparation: knowledge of Persian equivalent to course 102C. Introduction to history of Judeo-Persian literature and culture to prepare students to read Judeo-Persian texts. P/NP or letter grading.


140. Persian Belles Lettres (Adabyyât). (4) Lecture, three hours. Requisite: course 102C. Study of major Persian poets and prose writers: prose — Shirazi, Hafiz, Rumi, Bahâr, and other poets; poetry — Hâfez, Sa’di, Rumi, Bahâr, Derakhshân, and others. May be repeated for credit with consent of instructor. 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 Middle Iranian. (4-4-4) Lecture, three hours. Preparation: knowledge of Persian desirable. Course 161A is requisite to 161B, which is requisite to 161C. Studies in grammars and texts of Middle Iranian languages (e.g., Middle Persian, Parthian, Sogdian, Khotanese, Bactrian). 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 Sasanian period.

170. Religion in Ancient Iran. (4) History of religion in Iran from the beginning to the Mohammedian conquest; Indo-Iranian background, Zarathoastrianism, Manichaeanism, Mazdakism.


181F. Special Studies: Readings in Iranian. (2) Seminar, two hours. Requisite: course 102C. Students must be concurrently enrolled in affiliated main 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 material required. May be repeated for credit. Individual contract required. P/NP or letter grading.

199. Directed Research or Senior Project in Iranian. (2 to 4) Tutorial, one hour. Limited to juniors/seniors. Supervised individual research or investigation under supervision of faculty member. Individual project or paper required. May be repeated for credit. Individual contract required. P/NP or letter grading.

Graduate Courses

M210. Topics in Ancient Iranian History. (4) (Same as Ancient Near East M208 and History M210.) Seminar, three hours. Varying topics on Elamite, Achaemenid, Arasid, and Sassanian history. May be repeated for credit. S/U or letter grading.


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) (Same as South Asian M222A-M222B.) Lecture, three hours. Preparation: knowledge of Sanskrit equivalent to South Asian 110C. Characteristics of Vedic dialect and readings in Rig-Vedic hymns. Only course M222B may be repeated for credit. S/U or letter grading.

231A-231B-231C. Advanced Middle Iranian. (4-4-4) Lecture, three hours; laboratory, one hour. 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, Parthian, Sogdian, Khitanan, 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.


596. Directed Individual Study. (2 to 8) Tutorial, to be arranged. May be repeated for credit. S/U or letter grading.


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 research developments in following disciplines: Arabic language and literature, Qur’anic sciences, traditions, jurisprudence, theology, and Sufism. Letter grading.

596. Directed Individual Study. (2 to 8) Tutorial, to be arranged. May be repeated for credit. S/U or letter grading.


The following courses cannot be taken for credit more than once.

Jewish Studies

Lower Division Course

M107. Islam in West. (3) (Same as Arabic M107 and Religion M107.) Lecture, three hours; discussion, one hour. Acquisition of understanding of basic doctrines and practices of Islam. Survey of history of Islam in West, with focus on U.S. and France. Analysis of issues relevant to growth and development of selected Muslim communities in West. Exposure to diverse expressions of Islam through independent research on Muslim communities and institutions in U.S. Development of strong analytical writing and speaking skills. P/N or letter grading.

M110. Introduction to Islam. (5) (Formerly numbered 110.) (Same as Religion M109.) Lecture, three hours; discussion, one hour. Genesis of Islam, its doctrines, and practices, with readings from Qur’an and Hadith; schools of law and theology; piety and Sufism; reform and modernism. P/N or letter grading.

130. Shi’i in Islamic History. (4) Seminar, three hours; discussion, one hour. Rise and development of Shi’a Islam, its doctrines, and practices; major branches: Twelvers, Ismailis, Zaydis; their contribution to Islamic thought and civilization; modern trends of reinterpretation and reform. Letter grading.

151. Contemporary Islamic Thought. (4) Lecture, 90 minutes; discussion, 90 minutes. Recommended requisite: course M110. Based on original writings of major Islamic thinkers in English translation, provides balanced picture of enormous ideological variety found in contemporary Muslim world. Examination of representative writings from wide spectrum of modern Islamic intellectuals and writers. Letter grading.

197. Individual Studies in Islamic 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 matter required. May be repeated for credit. Individual contract required. P/N or letter grading.

199. 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. Culumminating paper or project required. May be repeated for credit. Individual contract required. P/N or letter grading.

Upper Division Course

M113. Contemporary Israeli Short Stories/Novel- las and Films in English. (5) (Same as Hebrew M113.) Lecture, three hours; laboratory, two hours. Exploration of Israeli short stories/novellas and films (translated into English) that use, each to varying degree, postmodernist techniques to undermine predominance of modernist-Zionist narrative. Recycling and reexamination of Israeli condition and Zionist condition and skepticism about legitimacy of meta-narratives to redefine blurred outline of Israeli identity and subvert its overpowering formative myths. They simultaneously display loss of faith in representational dimensions of language and literature, and the possibility of texts to penetrate to its hidden meaning. Using periphrastic discourses, these texts strive to change modernist aesthetic and power paradigm. P/N or letter grading.

130. 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/N 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 integration of successive immigrants and development of institutions. P/N or letter grading. 140A. 1654 to 1914; 140B. 1914 to the Present.

141. Modern Anti-Semitism. (4) Lecture, four 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, Beiliss Trial, Holocaust); Jewish response to anti-Semitism.

142. Modern Israel: Politics, Society, Culture. (4) Lecture, three hours. Examination of evolution of Isra- el — its changing society, volatile domestic and foreign politics, and dynamic culture — from its foundation in 1948 in the context of global political and cultural change and changing Jewish world. Tension between Israel’s conception of itself as Jewish state and fact that it is home to wide variety of ethnic and religious groups and to great diversity of cultures; tensions between Jews and Arabs, secular and religi- ous Jews, and disparate ethnic groups. P/N or letter grading.

143. Introduction to Jewish Folklore. (4) Lecture, three hours. Nature of Jewish folklore; narrative, folk songs, folk tales, folk religion, and methods and perspectives used in their analysis. P/N or letter grading.

144. Zionism: Ideology and Practice in Making of Jewish State. (4) Lecture, three hours; discussion. One course in 20th century trends in Jewish Studies. Examination of major issues in Jewish history. May be repeated for credit. P/N or letter grading.

M150A-150B. Hebrew Literature in English. (4-4) Lecture, three hours. May be taken independently for credit. M150A. Literary Traditions of Ancient Israel: Bible and Apocrypha. (Same as Comparative Literature M101.) Study of literary culture of ancient Israel through its principal compositional strategies of Hebrew Bible and Apocrypha (read in translation). P/N or letter grading. M150B. Rabbinic Judaism. (4) Study of the emergence of rabbinic Judaism; its original literary forms; rabbinic worldview; forms of medieval rabbinic literature; modern Jewish religious movements and their attitude to rabbinic Judaism. P/N or letter grading.

M151A-151B. Modern Jewish Literature in English. (4-4) Lecture, three hours. May be taken independently for credit. M151A. Diaspora Literature. (Same as Comparative Literature M168.) Study of literary responses of Jews to modernity, its challenges, and threats. Readings in texts originally written in English or translated from Hebrew, Yiddish, German, Russian, French, and Italian. Analysis of formal and social work. M151B. Modern Israeli Literature. Study of translations from Hebrew literature written in Israel and reflecting cardinal facets of Israeli life: social issues, security problems, identity of the state, role of individual. Analysis of formal aspects of each work.

155. Jewish Mysticism, Magic, and Kabbalah. (4) (Formerly numbered 155.) (Same as Religion M155.) Lecture, three hours. Exploration of types of Jewish mystical thought about the Hebrew Bible to medieval Kabbalah and its modern offshoots. P/N or letter grading.

162. Israel Seen through Its Literature. (4) (Same as Comparative Literature M162.) Lecture, three hours. Attempt to improve 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/N or letter grading.


175. Modern Israeli Literature Made into Films. (5) (Formerly numbered 75.) Lecture, four hours; discussion, one hour. Reading, analysis, and discussion of modern Israeli literature that was made into films, including literary works of prominent Israeli authors (S. Yizhar, A.B. Yehoshua, Amos Oz, and Yitzhak Ben Ner) that were translated to English and had filmic adaption. P/N or letter grading.

177. Variable Topics in Jewish Studies. (4) Lecture, three hours. Variables: Topics; consult Schedule of Classes for topics to be offered in specific term. May be repeated for credit. P/N 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 credit. No more than one topic and/or instructor change. P/N or letter grading.
Middle Eastern Studies

Middle Eastern Studies

Lower Division Courses

50A. First Civilizations. (5) (Formerly numbered Near Eastern Languages 50A.) Lecture, three hours; discussion, one hour (when scheduled). Survey of ancient Near Eastern history, the Indus Valley, and Mesopotamia, with attention to emergence of writing, monotheism, and urban societies. Letter grading.

M50B. Origins of Judaism, Christianity, and Islam. (3) (Formerly numbered Near Eastern Languages 50B.) Lecture, three hours; discussion, one hour. Examination of three monotheisms of Western cultures — Judaism, Christianity, and Islam — historically and comparatively. Development of appreciation for scripting of history, and common theological issues such as origin of evil and status of nonbelievers. Letter grading.

SO C. Making and Studying Modern Middle East. (3) (Formerly numbered Near Eastern Languages 50C.) Seminar, three hours; discussion, one hour. Survey of modern Middle Eastern cultures through readings and films from Arab countries, Iran, Turkey, and Israel. Letter grading.

Upper Division Courses

C122. History, Memory, and Identity in Israel. (4) Seminar, three hours. Israeli society was born in effort to reshape images of Jewish past and has been shaken by many debates over history, recent and ancient events, and how these are represented by historical scholarship as well as in popular media and public spaces. Traces over image of past have become central (in as many other societies) to debates about identity in present and directions, goals, and hopes for future. Exploration of ways in which struggles over past have shaped Israeli present. Examination of historical debates and their reflections in range of media to make some sense of ever-changing past, ways in which it shapes political, ideological, and cultural identities in present, and where meeting points are between popular discourse and work historians do. Examination of conflicting readings of past and its representation in Israeli historiography and in shaping of Israeli collective memory and identity. Concurrently scheduled with course C222. P/NP or letter grading.

M133. Bible and Qur’an. (4) (Same as Religion M133.) Seminar, three hours. Examination of conflicts and echoes in treatment of Jewish holy texts and its representation in Israeli historiography and in shaping of Israeli collective memory and identity. Concurrently scheduled with course C222. P/NP or letter grading.

M178. Variable Topics. (4) (Same as Religion M178.) Seminar, three hours. Interdisciplinary approach to some major topics in study of religion and Middle Eastern studies. May be repeated for credit with topic change. P/NP or letter grading.

Graduate Courses

200. Bibliography and Method of Near Eastern Languages and Literatures. (Formerly numbered Near Eastern Languages 200.) Lecture, four hours. Survey of major social, economic, and political factors that shaped lives of Europe’s Jews from outbreak of First World War to present. Emphasis on Jewish communities of interwar Europe, fate of Jews under Nazis, and character of post-war Jewish community. P/NP or letter grading.

202. Colonization and Nationalism: Jewish Settlement in Palestine. (2 to 4) Seminar, three hours. 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. Study of Religion: Theory and Method. (4) (Formerly numbered Near Eastern Languages 210.) Seminar, three hours. Preparation: familiarity with at least two major world religions. Designed for advanced undergraduate and graduate students. Introduction to variety of theories and methods used in academic study of religion. In attempt to demonstrate importance that historical, and social sciences play in development of religious traditions, discussion of theories comparatively and in their historical context, with focus on presuppositions and core concepts and implications of each theory. Letter grading.

211. Survey of Afro-Asiatic Languages. (4) (Formerly numbered Near Eastern Languages 211.) Lecture, three hours. Survey of structures of number of representative languages from major branches of Hamito-Semitic (Afro-Asiatic) language family. S/U or letter grading.

222. History, Memory, and Identity in Israel. (4) (Formerly numbered Near Eastern Languages 222.) Seminar, three hours. Israeli society was born in effort to reshape images of Jewish past and has been shaken by many debates over history, recent and ancient events, and how these are represented by historical scholarship as well as in popular media and public spaces. Traces over image of past have become central (in as many other societies) to debates about identity in present and directions, goals, and hopes for future. Exploration of ways in which struggles over past have shaped Israeli present. Examination of historical debates and their reflections in range of media to make some sense of ever-changing past, ways in which it shapes political, ideological, and cultural identities in present, and where meeting points are between popular discourse and work historians do. Examination of conflicting readings of past and its representation in Israeli historiography and in shaping of Israeli collective memory and identity. Concurrently scheduled with course C122. S/U or letter grading.


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Near Eastern Languages

Lower Division Course

M20. Visible Language: Study of Writing. (8) (Same as Asian M20, Indo-European Studies M20, Slavic M20, and Southeast Asian M20.) Lecture, three hours; discussion, one hour. Consideration of concrete means of language representation in writing systems. Earliest representations of language known are those of Near East dating to end of 4th millennium B.C. While literate civilizations of Egypt, Indus Valley, China, and Mesoamerica left little evidence of corresponding earliest developments, their antiquity and, in case of China and Mesoamerica, their evident isolation 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.

Graduate Courses

375. Teaching Apprentice Practicum. (1 to 4) Seminar, to be arranged. Preparation: apprentice personnel employment as teaching assistant, associate, or fellow. Teaching apprenticeship under active guidance and supervision of regular faculty member responsible for curriculum and instruction at UCLA. May be repeated for credit. S/U grading.

495. Preparation for Teaching Language and Literature in Near Eastern Languages and Cultures. (2) Seminar, two hours. Problems and methods of presenting literary texts as exemplary materials in teaching of language and literature in Near Eastern Languages and Cultures. Theory and classroom practice, with individual counseling and faculty evaluation of teaching assistant performances. May not be applied toward M.A. 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.

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. Advanced Akkadian syntax and grammar; reading of Akkadian historical and literary texts. May be repeated for credit. P/NP or letter grading.

142. Akkadian Literary Texts. (4) Lecture, three hours. Selected readings from Akkadian myths and epics, with introduction to historical tradition of works and their literary structure. May be repeated for credit. P/NP or letter grading.

197. Individual Studies in Semitics. (2 to 4) Tutorial, one hour. Limited to juniors/seniors. Individual intensive study, with scheduled meetings to be arranged between faculty member and student. Assigned reading and tangible evidence of mastery of subject matter required. May be repeated for credit. Individual contract required. P/NP or letter grading.

198. 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. Culumnating paper or project required. May be repeated for credit. Individual contract required. P/NP or letter grading.

Graduate Courses


215B. Syriac. (4) Lecture, two hours. Morphology and syntax of Syriac language; readings in Syriac; translation of Pali and Syriac literature. May be repeated for credit. S/U or letter grading.


230. Seminar: Northwestern 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 or letter 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.

241X. 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-290C. 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.


Turkish Languages

Upper Division Courses

101A-101B-101C. Elementary Turkish. (5-6-5) 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 Uyghur. (4-4-4) Lecture, three hours; laboratory, two hours. Elementary grammar, reading, and composition exercises; elementary conversation.

112A-112B-112C. Advanced Uyghur. (4-4-4) Lecture, three hours; laboratory, two hours. Descriptive Uyghur grammar, reading, and analysis of Uyghur literary and folkloric texts.

M115A-M115B-M115C. Elementary Azeri. (4-4-4) (Formerly numbered 115A-115B-115C.) Lectures, five hours. Knowledge of Russian, Turkish, and Iranian helpful. Grammatical competence at elementary level; knowledge of basic facts of Azeri grammar; reading competence with help of dictionary; ability to write simple compositions; basic conversational skill. P/NP or letter grading.

116A-116B-116C. Advanced Azeri. (4-4-4) Lecture, three hours; discussion; one hour; laboratory; one hour. Preparation: placement test. Proficiency-based course in descriptive Azeri grammar. Reading and analysis of Azeri literary and folkloric texts in new writing system. High-style composition and conversation. May be repeated for credit. Letter grading.

120A-120B-120C. Descriptive Grammar of Modern Turkish Literature. (4-4-4) Lecture, three hours; discussion, one hour; laboratory, one hour. Requisites: courses 102A, 102B, and 102C, or 111A, 111B, and 111C, or 180. Systematic and comprehensive grammatical survey of modern Turkish literature, official language of the newly independent Republic of Uzbekistan. Phonemics, morphology, syntax, paralemiology, and lexicology 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 documents produced in Turkish and Persian in Central Asia, with reading of primary sources in English translation. Study of special characteristics of Central Asian Islam.


197. 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 read-
ing and tangible evidence of mastery of subject mat-

ter required. May be repeated for credit. Individual
contract required. P/NP or letter grading.

199. 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 literary language of Ottoman Empire from its foundation in the 14th century to its overthrow in the 20th century. For stu-

dents of history, literature, and religion of the Balkans, Near East, and Central Asia. Topics include Arabic script as applied to Ottoman; Arabic and Persian ele-

ments in grammar and vocabulary. Readings of his-

torical and literary texts.

211. Ottoman Diplomatics. (4) Lecture, three hours. Requisites: courses 210A, 210B, 210C. Organization and content of Ottoman archives; reading and cussion of documents and registers. Introduction to use of Ottoman archive materials as a source for his-
torical research.

tion and historical grammar, text analysis, translation, and composition drills.

225A-225B-225C. Old Turkic: Turk and Uyghur. (4-4-

4) Lecture, three hours. Requisite: course 180. Textual and linguistic analysis of Turk and Old Uyghur docu-

ments: inscriptions, Manichean and Buddhist literary works.

230A-230B-230C. Historical and Comparative Sur-

vey of Turkic Languages. (4-4-4) Lecture, three hours. Requisite: course 180. Extinct and living Turkic languages. History of Turkic: developments in phone-
ic, grammatical, and lexical systems from the 8th to the 20th century. Structural analysis of Turkic languages on comparative basis.

235A-235B. Middle Turkic: Karakhanid, Khora-

zman, Mamluk-Kipchak, and Old Anatolian. (4) 
Lecture, three hours. Requisite: course 180. Survey of Middle Turkic documents. Textual and linguistic ana-

lysis of Middle Turkic texts from various literary genres.

240A-240B-240C. Advanced Ottoman. (4-4-

4) Lecture, three hours. Requisites: courses 210A, 210B, and 210C. Emphasis on different genres of Ottoman writ-
ing (belles lettres 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 Chaghatay. (4-4-

4) Lecture, three hours. Requisites: courses 210A, 210B, and 210C. Philosophical and linguistic analysis of basic Islamic source material written in Chaghatay literary language. Reading and discussion of Chaghatay texts on Islamic poli-
sics.

280A-280B. Seminars: Modern Turkish Literature. 
(4-4) Seminar, two hours. Requisite: course 102B. Specific issues and trends in development of Turkish literature from middle of 19th century to the present.


596. Directed Individual Study. (2 to 8) Tutorial, to be arranged. May be repeated for credit. S/U or letter grading.


ment era through latter 20th century. Emphasis on fundamental nerve functions, cell communication, and topics related to social and cultural influences that have shaped understanding of brain and nervous system. P/NP or letter grading.

Graduate Course

596. Directed Individual Studies in Medical History. (2 to 12) Tutorial, to be arranged. Investigation of subjects in medical history selected by students with advice and direction of instructor. Individual reports and conferences. S/U or letter grading.

Neurobiology

Lower Division Course

88. Lower Division Seminar: Special Topics in Neurobiology. (4) Seminar, three hours; outside study, nine hours. Requisite: satisfaction of Entry-Level Writing requirement. Variable topics seminar that examines specific issues or problems and ways that professionals in neurobiology approach study of them. Students define, prepare, and present their own research projects with guidance of professional school faculty member. Letter grading.

Upper Division Courses

106. Functional Neuroanatomy. (4) Lecture/laboratory, three two-hour sessions. Designed for dental students and with instructions, laboratories dealing with structure and functional organization of nervous system, P/NP or letter grading.

M168. Ideas and Experiments in History of Physiology. (4) Same as Physiological Science M168.) Lecture, three hours. Interaction of concepts and experimental techniques in physiology from the early 19th to latter 20th centuries, including heart and circulation, hormones, nutrition and vitamins, brain, spinal cord, and peripheral nervous system, as well as development of physiology as scientific discipline. Discussion of weekly readings and presentations by students. Letter grading.

M169. History of Neurosciences. (4) Same as Medical History M169.) Lecture, one hour; discussion, two hours. Development of neurosciences, especially neuroanatomy and neurophysiology, from Enlightenment to late 20th century. Emphasis on fundamental nerve functions, cell communication, and technological, conceptual, and cultural influences that have shaped understanding of brain and nervous system. P/NP or letter grading.

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 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 subcellular, cellular, and structural organization of nervous system. Specific topic areas include neuronal ultrastructure, cellular neurobiology, neuroanatomy, neural circuitry, and imaging. Letter grading.

M200B. Cell, Developmental, and Molecular Neurobiology. (6) (Same as Molecular, Cell, and Developmental Biology M200 and Neuroscience M200.) Lecture, six hours. Fundamental topics concerning cellular, developmental, and molecular neurobiology, including intracellular signaling, cell-cell communication and neural networks. Fundamental topics synapse formation and elimination, programmed neuronal death, and neurotrophic factors. Letter grading.

M200C. Sensory Systems Neurobiology. (4) (Same as Neuroscience M221.) Lecture, two hours; discussion, two hours. Fundamental topics in sensory systems neurobiology, including touch, taste and olfaction, audition, vision, and somatosensory system. Letter grading.

200D. Motor Systems Neurobiology. (4) Lecture, four hours. Fundamental topics in motor systems neurobiology, including muscle, motor units, and motor neuron pools, spinal motor control, reflexes, locomotion, basal ganglia, cerebellum, and eye movements. Letter grading.

200E. 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, memory, sleep and sleep disorders, and behavioral disorders. Letter grading.

M200F. Cellular Neurophysiology. (4) Same as Neuroscience M220 and Physiological Science M202.) Lecture, three hours; discussion, two hours. Requisites: Physiological Science 111A (or M180A or Physics B1). 166. Advanced course in cellular physiology. Topics include resting and action 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.

M200G. Biology of Learning and Memory. (4) (Same as Molecular, Cellular, and Integrative Physiology 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 topics that take advantage of novel groundbreaking models. Letter grading.

220. Structural Neurobiology. (2) Lecture, two hours; discussion, two hours; laboratory, two hours. Introduction to molecular, chemical, electron microscopic and mixed synapses as determined by imaging methods such as electron tomography. Comprehensive review of current principles governing synaptic transmission and formation and accounts of some of most topi- cal areas of field, such as neurotransmitter, ions, kiss and run, and fast exocytosis. Laboratory sessions review methods for preparing samples through in-depth analysis of imaging strategies. Computer laboratory sessions allow demonstration of data processing and interpretation. Three round table discussions provide forum for further inspiration as well as tackling any questions or difficulties that arise from laboratory sessions. P/NP grading.

225. Functional Organization of Visual System. (2) Seminar, three hours. Preparation: basic neurosc. Science course. Recommended: molecular, cellular, and physiological sciences courses. Designed for neuroscientists, cell biologists, and psychologists. Basic organizational, physiological, and functional principles of visual system and how visual information is processed at different levels of nervous system. Structure, microcircuity organization and function of retina, central visual nuclei, and primary cortical areas mediating visual behavior. S/U or letter grading.

M227. Neuroendocrinology of Reproduction. (4) (Same as Physiological Science M227.) Lecture, three hours; discussion, one hour. Preparation: undergraduate life sciences and chemistry courses. Structural, functional, and developmental aspects of neuroendocrine system and reproductive axis, with emphasis on feedback regulatory mechanisms between hypotha-

lamic-pituitary and gonadal functions and on functional integration of neuroendocrine-reproductive axis with other endocrine and peripheral systems. Letter grading.


270. Joint Seminar: Neuroscience Lectures. (1) Seminar, one hour. Formal lectures on current research topics in neurobiology by speakers from national, international, and local neuroscience community. S/U 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 and memory. Language and communication, and thinking and problem solving. Letter grading.

295. Culture of Neurobiology. (2) Discussion, one hour. 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.

296. 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.

298A-298B-298C. Advanced Topics in Neurobiology. (2-2-2) Seminar, one hour; discussion, one hour. Advanced seminar course in neurobiology to be offered by different departmental faculty members. Topics are grouped thematically. S/U grading. 298A. Molecular, Cellular, and Developmental Neurobiology; 298B. Sensory and Motor Systems Neurobiology; 298C. Regulatory, Behavioral, and Cognitive Neurobiology.

495. 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 review sessions, all with peer and faculty criticism. Gross anatomy, microscopic anatomy, and neuroanatomy subject fields included. May not be applied toward degree requirements. S/U grading.

501. Cooperative Program. (2 to 8) Tutorial, to be arranged. Preparation: consent of UCLA graduate advisor and graduate dean, and host campus instructor, department chair, and graduate dean. Used to record enrollment of UCLA students in courses taken under cooperative arrangements with USC. S/U grading.

596. Directed Individual Study or Research. (2 to 12) Tutorial, to be arranged. S/U grading.

597. Preparation for M.S. Comprehensive Examination or Ph.D. Qualifying Examinations. (2 to 12) Tutorial, to be arranged. S/U grading.


Neurology is the medical science dealing with the normal and diseased nervous system. Neurological disorders are often associated with significant disability, morbidity, and mortality. Their higher incidence in association with greater longevity of the population, increased awareness, improved diagnostic methods, and other factors place neurological disorders among the major medical problems today. The Department of Neurology and the Reed Neurological Research Center provide means for a coordinated basic science and clinical research approach to neurological disorders, patient care, and neurological education.

The department instructs medical students throughout the four years. Emphasis in the first year is on basic aspects of neuroanatomy, chemistry, and physiology; in the second year, neurological history taking and neurological examination of afflicted patients are stressed. The third year consists of a clerkship, and the fourth year provides electives in neurology, including an advanced clinical clerkship. Graduate students and postdoctoral candidates are trained in both the basic and clinical laboratories.

For further details on the Department of Neurology and a listing of the courses offered, see http://www.neurology.ucla.edu.

Neurology

Upper Division Course

199. Directed Research in Neurology, (2 to 8) Tutorial, two hours. Limited to juniors/seniors. Supervised individual research or investigation under guidance of faculty mentor. Culminating paper required. May be repeated for credit. Individual contract required. P/NP or letter grading.

NEUROSCIENCE

Interdepartmental Undergraduate Program

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Ellen M. Carpenter, Ph.D., Chair

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Carlos V. Grijalva, Ph.D. (Psychology)

Patricia E. Phelps, Ph.D. (Biological and Biomedical Sciences)

Joseph B. Watson, Ph.D., in Residence (Psychiatry and Biobehavioral Sciences)

Stephanie White, Ph.D. (Biological and Biomedical 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 seek 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, 14A, 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 (with grade of C– or better for Neuroscience majors), 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 199A and 199B. Students who select the Neuroscience 101L capstone research option must take four upper division electives, with at least one from each of the three elective options. Students who select the Neuroscience 198A and 198B, or 199A and 199B option must take three upper division electives, one from each elective option. No more than eight courses may be from any one department. A maximum of 8 units of 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.

Honors 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.ucla.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, physics, and biology are requisites to the upper division course requirements.

Required Upper Division Courses (approximately 31 units): Neuroscience M101A, M101B, M101C (5 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.

A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor.

Each minor course must be taken for a letter grade, and students must have an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

Neuroscience
See the Neuroscience Interdepartmental Graduate Program for the graduate course offerings.

Lower Division Courses
10. Brain Made Simple: Neuroscience for the 21st Century. (4) Lecture, four hours. Preparation: high school background in either biology or chemistry. Not open for credit to students with credit for course M101A (or Molecular, Cell, and Developmental Biology M175A or Physiological Science M180A or Psychology M117A or Physiological Science 111A or Psychology 115). General overview and introduction to most exciting and fundamental topics encompassing field of neuroscience. P/NP or letter grading.

Upper Division Courses
M101A-M101B-M101C, Neuroscience: From Molecules to Mind. (5-5-5) (Same as Molecular, Cell, and Developmental Biology M175A-M175B-M175C, Physiological Science M180A-M180B-M180C, and Psychology M117A-M117B-M117C.) Lecture, four hours; discussion, 90 minutes. P/NP or letter grading M101A. Cellular and Systems Neuroscience. (5) Lecture, four hours; discussion, 90 minutes. Requisites: Chemistry M101 taken concurrently, Life Sciences 2, Physics 1B or 1BH or 6B or 6BH. Not open for credit to students with credit for Physiological Science 111A. For Neuroscience and Physiological Science majors, grade of C– or better is required to proceed to Neuroscience M101B or Physiological Science 111B. Cellular neurophysiology, membrane potential, action potentials, and synaptic transmission. Sensory systems and motor system; how assemblies of neurons process complex information and control movement. P/NP or letter grading.

M101B, Molecular and Developmental Neuroscien- (5) Lecture, four hours; discussion, 90 minutes. Requisites: course M101A for Molecular, Cell, and Developmental Biology M175A or Physiological Science M180A or Psychology M117A. Neuroscience majors must have grade of C– or better) or Physiological Science M180A or Psychology M117A; Neuroscience majors must have grade of C– or better) or Physiological Science 111A or Psychology 115. Neural mechanisms underlying motivation, learning, and cognition. P/NP or letter grading.

M101C. Behavioral and Cognitive Neuroscience. (5) Lecture, four hours; discussion, 90 minutes. Requisite: course M101A (or Molecular, Cell, and Developmental Biology M175A or Physiological Science M180A or Psychology M117A: Neuroscience majors must have grade of C– or better) or Physiological Science 111A or Psychology 115. Neural mechanisms underlying motivation, learning, and cognition. P/NP or letter grading.


M119L. Human Neuropsychology. (4) (Same as Psychology M119L.) Lecture, three hours. Recommended requisites: courses M101A and M101C (or Psychology 115), Psychology 120A or 120B. Designed for juniors/seniors. Survey of experimental and clinical human neuropsychology; neural basis of higher cognitive function. P/NP or letter grading.

M119N. Visual System. (4) (Same as Psychology M119N.) Lecture, three hours. Requisite: course M101A or Physiological Science 111A or Psychology 115. Ability to learn to analyze visual world is truly remarkable feat. Coverage of anatomy and physiology of visual processing from retina to visual cortex through lectures, extensive reading, and discussions. P/NP or letter grading.

M130. Biological Bases of Psychiatric Disorders. (4) (Same as Molecular, Cell, and Developmental Biology M181 or Physiological Science M181, Psychiatry M181, and Psychology M117J.) Lecture, three hours. Requisite: course M101A (or Molecular, Cell, and Developmental Biology M175A or Physiological Science M180A or Psychology M117A or Physiological Science 111A or Psychology 115). Underlying brain systems involved in psychiatric symptoms and neurological disorders, including schizophrenia, depression, bipolar disorder, obsessive-compulsive disorder. Provides basic understanding of brain dysfunctions that contribute to disorders and rationales for pharmacological treatments. P/NP or letter grading.

M145. Neural Mechanisms Controlling Movement. (4) (Same as Physiological Science M145.) Lecture, four hours. Requisite: course M101A or Physiological Science 111A or M180A. Examination of central nervous system organization required for production of complex movements such as locomotion, mastication, and swallowing. Letter grading.

M146. Neuronal Signaling in Brain. (4) (Same as Physiological Science M146.) Lecture, three hours; discussion one hour. Requisites: courses M101A (or Molecular, Cell, and Developmental Biology M175A or M180A, M101B (or Physiological Science M180B or Chemistry 153A). Consideration of brain function, with focus on cellular physiology and functional neuroanatomy. Topics include neuronal excitability and synaptic transmission and function of specific neuronal circuits in auditory pathway, basal ganglia, cerebellum, hippocampus, and neocortex. Letter grading.

C172. Neuroimaging and Brain Mapping. (4) Lecture, three hours. Requisite: course M101A (or Molecular, Cell, and Developmental Biology M175A or Physiological Science M180A or Psychology M117A or Psychological Science M111A or Psychology 115. Strongly recommended: course 102. Theory, methods, applications, assumptions, and limitations of neuroimaging. Techniques, biological questions, and results. Brain structure and function; their relationship discussed with regard to imaging. Concurrently scheduled with course CM272. Letter grading.

C177. Drugs of Abuse from Neuroscience to Policy and Education. (4) Lecture, four hours. Enforced requisite: course M101A. Course ranges from synapse to society. Provides intensive didactic on current neuroscience basis for understanding substance abuse and blends that material with relevant topics such as epidemiology, co-occuring disorders, treatment options, prevention, and public policies, with emphasis on communication of course materials to general public. Concurrently scheduled with course C277. Letter grading.

178. Human Electroencephalography and Evoked Potentials in Research and Clinical Diagnosis. (4) Seminar, four hours. Enforced requisite: course M101A. Not open for credit to students with credit for course 191A, seminar 1. Emphasis on human electroencephalogram (EEG) and various forms of sensory-evoked potentials. Introduction to number of experimental paradigms that allow for recording of different brain signals from brainstem to cortex. Letter grading.

179. Clinical Neuroscience: New Concepts in Neurological Disorders. (4) Lecture, four hours. Enforced requisite: course M101A. Not open for credit to students with credit for course 191A, seminar 1. Emphasis on human electroencephalogram (EEG) and various forms of sensory-evoked potentials. Introduction to number of experimental paradigms that allow for recording of different brain signals from brainstem to cortex. Letter grading.

180. Genetic, Molecular, and Genomic Approaches to Neural Development and Disease. (4) Seminar, three hours. Enforced requisite: courses M101A, M101B. Not open for credit to students with credit for course 191C, seminar 1. In-depth study of genetic, molecular, and genomic approaches to studying nervous system development and disease. Overview of current technologies used in these models for genetic and phenotypic analysis. Review of techniques for studying development and disease. Integrative genomic approaches for identifying and char-
181. Cellular and Molecular Mechanisms of Learning and Memory. (4) Seminar, four hours. Enforced requisite: course M101A. Not open for credit to students with credit for course 191C, seminar 2. Cellular models of learning and memory. Genetic and molecular approaches to learning and memory. Learning and memory deficits in neurodegenerative diseases. LTP and LTD models. Letter grading.


191H. Honors Seminars: Neuroscience. (4) Seminar, four hours. Preparation of one statistics course (Statistics 10 or equivalent). Limited to neuroscience honors program students. Instruction 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. Must be taken during Winter Quarter of academic year that students enroll in courses 198A and 198B. Letter grading.

192A. Practicum in Neuroanatomy for Undergraduate Assistants. (2) (Formerly numbered 192.) 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 as required. May not be applied toward elective requirements and may not be repeated for credit. P/NP or letter grading.

192B. Project Brainstorm: Neuroscience K-12 Outreach. (4) (Formerly numbered 195.) Seminar, one hour; fieldwork, four hours. Limited to juniors/seniors. Course to be supervised by faculty and teaching assistant advisers. Project Brainstorm is K-12 science education outreach program of Brain Research Institute (BRI) and Neuroscience 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.

192C. Drug Abuse and Society: Conveying Concepts to High School Students. (4) Seminar, four hours (seven weeks); fieldwork, four hours (three weeks). Enforced requisites: courses M101A, C177. Limited to senior Neuroscience majors. Preparation of students to give accurate, knowledgeable, and age-appropriate lectures in area of drug abuse to students at local high schools. Designed as follow-up to course C177 where students learned didactic material on mechanisms of action and translational aspects of drugs of abuse. Students meet on regular basis with supervisors and provide periodic reports of their experience. May not be applied toward major requirements. May be repeated twice for credit. 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 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. Letter grading.

199A. Directed Research in Neuroscience. (4) Tutorial, 12 hours minimum. Enforced requisites: courses 99, M101A. Limited to junior/senior Neuroscience majors and minors with grades of B (3.0) or better. Supervised individual research or investigation under guidance of faculty mentor. Tulminating 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 198B).

199B. Directed Research in Neuroscience. (4) Tutorial, 12 hours minimum. Enforced requisite: course 199A. Limited to junior/senior Neuroscience majors and minors with grades of B (3.0) or better. Continued supervised individual research or investigation under guidance of faculty mentor. Tulminating paper or project required. Maximum of 8 units of courses 198A, 198B, 199A, 199B may be applied toward major. Individual contract required. Letter grading.

199C. Continued Directed Research in Neuroscience. (4) Tutorial, 12 hours minimum in laboratory. Enforced requisite: course 198B 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.

NEUROSCIENCE Interdepartmental Graduate Program David Geffen School of Medicine

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Thomas J. O’Dell, Ph.D. (Psychology)
Thomas S. Otis, Ph.D. (Neurobiology)
Alvaro Sagasti, Ph.D. (Molecular, Cell, and Developmental Biology)

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://grad.ucla.edu/gasaaa /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. (8) (Same as Molecular, Cell, and Developmental Biology M202 and Neurobiology M203B.) Lecture, six hours. Fundamental topics concerning cellular, developmental, and molecular neurobiology, including intracellular signaling, cell-cell communication, neurogenesis and migration, synaptic formation and elimination, programmed neuronal death, and neurotropic factors. Letter grading.

M202. Cellular Neurophysiology. (4) (Same as Neurobiology M202F and Physiological Science M202F.) Lecture, three hours; discussion, two hours. Requisites: Physiological Science 111A (or M180A) or Phys-
icos 6B), 166. Advanced course in cellular physiology of neurons. Action and membrane potentials, channel proteins, gates, ion transport, neuronal homeostasis, synaptic receptors, drug-receptor interactions, transmitter release, modulation by second messengers, and sensory transduction. Letter grading.

M202. Anatomy: Structure and Function of Nervous System. (4) (Same as Bioengineering M263.) Lecture, three hours; discussion/laboratory, three hours. Anatomy of central and peripheral nervous system at cellular, histological, and regional system level, with emphasis on contemporary experimental approaches to morphological study of nervous system in discussions of circuitry and neurochemical anatomic interactions. 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 letter grading.


M206. Neuroengineering. (4) (Same as Bioengineering M260 and Electrical Engineering M255.) Lecture, four hours; laboratory, two hours; outside study, five hours. Requisites: Mathematics 32A, Physics 1B or 6B. Introduction to principles and technologies of bioelectricity, neural signal recording, processing, and stimulation. Topics include bioelectricity, electrophysiology (action potentials, local field potentials, EEG, ECoG, intracellular and extracellular recording, microelectrode technology, neural signal processing (neural signal frequency bands, filtering, spike detection, spike sorting, 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 experimental design, scientific writing, research integrity, authorship, peer review, use of animals and humans in biomedical research, conflicts of interest, technology, and scientific integrity. S/U grading.


215. Variable Topics Research Literature Seminars: Neuroscience. (1) Seminar, two hours. Critical discussion and analysis of current literature on topics in neuroscience. Only one topic may be taken twice for credit and applied toward neuroscience graduate requirements. S/U grading.

M220. Biology of Learning and Memory. (4) (Same as Molecular and Integrative Physiology M220G, Neurobiology M200G, 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 recent advances in molecular, cellular, and neural circuitry, and imaging. Letter grading.

M221. Sensory Systems Neurobiology. (4) (Same as Neurobiology M200C.) Lecture, two hours; discussion, two hours. Fundamental topics in sensory systems neurobiology, including sensory transduction, taste and smell, vision, auditory, and somatosensory system. 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 in introduction to mechanisms of synaptic processing. Selected problems of current interest, including regulation and modulation of transmitter release, biomedical bases of pain perception. Topics include classical pain pathways, pain receptors and pathways, pain modulation, neurotransmission, and pharmacological basis for treatment of pain disorders. Letter grading.

240. Phototopic Measurement of Complex Traits. (4) Lecture, four hours. Emphasis on understanding human genetics helpful. Integrative approach to understanding gene to behavior pathways by examination of levels of phenotype expression across systems (cell to organism), across species (invertebrate, fly, mouse, human), and through development across varying environmental milieus. Using examples from human disorders such as schizophrenia and Alzheimer’s disease, these diverse approaches in genetic research to map out integrative system of understanding basis of complex human behavior. Emphasis on basic understanding of methods used at each level, and integration of each analysis, along with major resources that can be accessed to gain insight to gene-behavioral links. Letter grading.

245. Optimal Approaches in Neuroscience. (4) Lecture, four hours. State-of-art, light-microscopy-based approaches in neuroscience. Background material on basic optical principles and microscope design, as well as certification in use of lasers. Technical approaches commonly used in study of nervous system, including confocal microscopy, two-photon microscopy, and electron microscopy, methods for imaging and stimulating neuronal activity, and advanced microscopy approaches such as FRET and FLIM. Letter grading.

250. Neuroimaging. (4) Lecture, four hours. Specific training in neural development. 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 changes in learned behavior. Different types of learning. Role of neurotransmitters and second messengers in changing ion channels of neurons to support associative learning versus long-term potentiation of neurotransmission. S/U or letter grading.

M267. Advanced Magnetic Resonance Imaging. (4) (Same as Biomedical Physics M266 and Psychology M266.) Lecture, four hours. Starting with basic principles, presentation of physical basis of magnetic resonance imaging (MRI), with emphasis on developing advanced knowledge about imaging, including both structural and functional studies. Instruction more intuitive than mathematical. Letter grading.


M273. Neural Basis of Memory. (4) (Same as Psychiatry M270.) Lecture, two hours; discussion, one hour. Anatomical, physiological, and neurochemical data integrated into models for how behavioral phenome- na of memory arise: Distinct memory systems, cortical conditioning, hippocampus and declarative memory, and frontal lobes and primary memory. Letter grading.

275. Advanced Techniques in Neurobiology. (2) Lecture, one hour; laboratory, one hour. Preparation: biochemistry, computer programming (any language). Requisites: provide introduction and, when possible, practical demonstration of a 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 CM277.) Lecture, four hours. Enforced requisite: course M101A. Course ranges from synapse to society. Provides integrative didactic on current neuroscientific basis of understanding and treatment of substance abuse and defines 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 CM117. Letter grading.

M284A-M284B. Principles of Neuroimaging I, II. (4-4) Lecture, one hour; seminar, 90 minutes every other week. Preparatory: competence in integral calculus, electricitiy and magnetism, computer programming (any language), general statistics. Requisite: Psychiatry 292. Course M284A is requisite to M284B. Instrumental imaging methods for study of nervous system, with emphasis on quantitative understanding and data interpretation and features common to modalities. X-ray computed tomography, magnetic resonance imaging, positron emission tomography, magnetoencephalography, transcranial magnetic stimulation, near infrared imaging. Letter grading.

M285. Functional Neuroimaging: Techniques and Applications. (3) (Same as Bioengineering M284, Biomedical Physics M285, Psychiatry M285, and Psychology M278.) Lecture, three hours. Preparation: Introductory course in human systems. Strong focus on understanding techniques, how to design, implement and fabricate experiments, 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 Neurobiology 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 M293, Education 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.

M294. Culture, Brain, and Development. (4) (Same as Anthropology M293S, Applied Linguistics M293, Education M296, 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 ontogeny and human phylogeny. S/U or letter grading.
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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 hypophysial, and (3) the operative and nonoperative management of pain.

As such, neurosurgery encompasses treatment of adult and pediatric patients with disorders of the nervous system — disorders of the brain, meninges, and skull and their blood supply, including the extracranial carotid and vertebral arteries, disorders of the pituitary gland, disorders of the spinal cord, meninges, and vertebral column, including those that may require treatment by spinal fusion or instrumentation, and disorders of the cranial and spinal nerves throughout their distribution.

For further details on the Department of Neurosurgery, see http://neurosurgery.ucla.edu.

Neurosurgery
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 a faculty mentor. Culminating paper required. May be repeated for credit. Individual contract required. P/NP or letter grading.

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Associate Dean for International Research and Scholarly Activities
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Associate Dean for Research
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Suzette Cardin, R.N., D.N.Sc., F.A.A.N.,
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Professors Emeriti
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Paul M. Macey, Ph.D., in Residence
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Adjunct Assistant Professors
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J. Kelly Graves, R.N., Ph.D.
Mary M. Marfise-Smith, M.D.
Kris McLaughlin, M.D.
Karabi Nandy, Ph.D.
Maria E. Ruiz, R.N., Ph.D.

Scope and Objectives
A strong scientific basis underlies the teaching of nursing practice, leadership, and research. Related clinical experiences are arranged within the UCLA School of Nursing, its affiliates, other major medical centers, or in selected community sites.

At the bachelor’s level, nurses are prepared as generalists with special skills in primary, secondary, and tertiary prevention and care within a population-based context, leadership, and evidence-based practice. At the master’s level, nurses are prepared as generalists in hospital-based care or for advanced nursing practice as nurse practitioners, clinical specialists, or administrators in a variety of settings and specialized areas of healthcare. The 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 Nursing (Prelicensure) major is a designated capstone major. Students complete a clinically based scholarly project that is ap-
proven 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 services, 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.

Nursing B.S. Precordence
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 freshmen 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, Mathematics 3A or 31A, Microbiology, Immunology, and Molecular Genetics 10, Nursing 3, 10, 13, 20, 50, 54A, 54B, Psychology 10.

Transfer Students

Transfer applicants to the Nursing major with 90 or more units must complete the following introductory courses prior to admission to UCLA: calculus, communications, human anatomy, human physiology, inorganic and organic chemistry, cells, tissues, and organs, microbiology, molecular biology, and introductory or general psychology.

The Major

Required: Biostatistics 100A, Nursing 115, 150A, 150B, 152W, 160, 161, 162A through 162D, 164, 165, 168, 171, 173, 174, and completion of a capstone senior scholarly project (course 169). Transfer students must complete Nursing 10, 20, 50, 54A, and 54B on entry. Students may request to pursue a minor in a related field if the coursework can be completed within the 216-unit limit.

The curriculum at UCLA must be completed with a minimum overall grade-point average of 2.0 (C) or better in all courses taken while a student in the School of Nursing. Each required nursing course in the school must be completed with a grade of C or better (C– grade is not acceptable).

Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website, http://grad.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

3. Human Physiology for Healthcare Providers. (5) Lecture, three hours; laboratory, two hours. Basic understanding of human physiological processes, with emphasis on applications to patient evaluation and care. Concepts underlying normal function and how alterations in these normal functions can affect body systems. Knowledge and understanding of these normal human processes is basic to providing quality nursing care. Examination of system variations across lifespan. Letter grading.

10. Introduction to Nursing and Social Justice I. (2) Lecture, two hours. Within context of history of nursing, introduction to practice of nursing, including role of advocacy. Discussion of effective use of self as professional nurse in relation to ethics, cultural competence, and human diversity. Introduction to ethical principles (justice, autonomy, veracity, beneficence, confidentiality) and professional values (altruism, autonomy, human dignity, integrity, and social justice) in relation to nursing practice throughout history in health/illness and end-of-life contexts. Letter grading.

13. Introduction to Human Anatomy. (5) Lecture, three hours; laboratory, two hours. Structural presentation of human body, including musculoskeletal, nervous, circulatory, respiratory, digestive, renal, and reproductive systems. Laboratory uses virtual cadaver dissection and examination. Letter grading.

20. Introduction to Nursing and Social Justice II. (2) Lecture, two hours. Advanced discussion on history of nursing in relation to ethics and social justice. Analysis of ethical principles (justice, autonomy, veracity, beneficence, confidentiality) and professional values (altruism, autonomy, human dignity, integrity, and social justice) in relation to nursing practice throughout history in health/illness and end-of-life contexts. Evaluation of social, cultural, legal, and political forces in relation to paternalism for professional nurses working with diverse patient populations in the 21st century. Letter grading.

50. Fundamentals of Epidemiology. (4) Lecture, three hours; laboratory, three hours. Epidemiology focuses on distribution and determinants of health-related states or events in specified populations. Fundamentally, epidemiology seeks to control health problems in communities and institutions. Letter grading.

54A. Pathophysiology I. (3) Lecture, three hours. Preparation: human physiology course taken within past five years. Designed to provide students with basic understanding of pathophysiological changes that occur within internal environment of individuals. Understanding these alterations is basic to providing quality nursing care. Discussion of system variations across lifespan. Letter grading.

54B. Pathophysiology II. (2) Lecture, two hours. Requisite: course 54A. Designed to provide students with understanding of pathophysiological changes that occur within internal environment of individuals. Presence of dysfunction or disease of selected systems provided as rationale for nursing diagnosis and therapeutic interventions. Letter grading.

Upper Division Courses

105. Human Physiology. (4) Lecture, three hours; discussion, one hour. Designed for nursing students. Lecture and discussion, with emphasis on a correlating approach to anatomy and physiology of human body. PNIU or letter grade required.

115. Pharmacology and Therapeutics. (5) Lecture, four hours. Requisites: courses 54A, 54B. Clinical pharmacology for undergraduate nursing students, beginning with emphasis on basic pharmacologic principles. Focus on major drug classes and their mechanism of action, pharmacokinetics, adverse effects, and clinical issues. Letter grading.

150A. Theoretical Foundations of Nursing B.S. Role and Functions of Professional Nursing Practice/Letter Practice. (5) Lecture, three hours; laboratory, three hours. Introduction to practice of professional nursing as theory-based goal-directed method for assisting persons to meet basic human needs at various levels of health continua. Concepts of communication, interdisciplinary communication and collaboration, interpersonal relationships, cultural competence, and nursing process as clinical decision-making strategies essential to practice of professional nursing. Characteristics and roles of professional nursing. Development of caregiver, teacher, and collaborator roles in learning experiences in nursing skills laboratory and clinical settings. Letter grading.

150B. Theoretical Foundations of Nursing B.S. Role and Functions of Professional Nursing Practice/Letter Practice. (4) Lecture, three hours; laboratory, three hours. Requisite: course 150A. Continuation of course 150A. Expansion of student knowledge on practice of professional nursing.
as theory-based goal-directed method for assisting patients to meet basic human needs at various levels of health continua. Concepts of communication, interdisciplinary communication and collaboration, interpersonal relationships, cultural competence, and nursing process as clinical decision-making strategies essential to practice of professional nursing. Characteristics and dynamics of nurses, the development of the role of the nurse, and collaborative teaming of healthcare providers, the concept of nurses as bedside scientists, with emphasis on critical and contextual thinking skills and diagnostic reasoning. Nursing process, ethical principles, clinical research, evidence-based practice, and clinical reasoning. Letter grading.

162C. Tertiary Prevention and Care of Geriatric Medical-Surgical Patients and Families. (8) Lecture, four hours; clinical, 12 hours. Enforced requisites: courses 162A, 162B, 162C, 162D. Examination of pathophysiological and psychosocial aspects of assessment and management for selected acute and chronic problems of adult patients/clients with complex illness, including multi-faceted assessment, health history, and diagnostic reasoning skills, with emphasis on historical, cultural, and developmental influences. Integration of knowledge of caregivers, therapeutic interventions, and communication concepts as applied to care of older medical and surgical patients. Experimental practicum experience within setting of multidimensional team, with focus on clinical interpretation of assessment and diagnostic data for purpose of planning, implementing, and evaluating nursing care for older adults used during clinical experiences. Letter grading.

162D. Human Responses to Critical Illness: Introduction to Critical Care. (4) Lecture, three hours; clinical, three hours. Enforced requisites: courses 162A, 162B, 162C. Pathophysiological and psychosocial concepts in acute life limitation and death and in ambulatory and critical care settings, including acute care settings, community agencies, rehabilitation units, outpatient specialty clinics and surgical units, and home and community settings. Letter grading.

162A. Foundations Course for Tertiary Prevention and Care of Patients with Critical-Stage Illness. (4) Formerly numbered 163. Lecture, three hours; clinical, three hours. Corequisite: course 150A. Examination of nursing assessment and management of complex health problems that adults experience. Theory content in basic assessment, health history, and diagnostic reasoning for selected health problems, with emphasis on social, cultural, and developmental influences. Integration of basic knowledge of pathophysiology, stress and adaptation, adult development theory, therapeutic interventions, and communication concepts as applied to care of medical and surgical clients and their families. Introduction to concepts of nurses as bedside scientists, with emphasis on critical and contextual thinking skills and diagnostic reasoning. Nursing process, ethical principles, clinical research, evidence-based practice, and clinical reasoning. Letter grading.

162B. Tertiary Prevention and Care of Medical-Surgical Patients and Families. (6) Lecture, four hours; clinical, six hours. Enforced requisites: course 162A. Examination of pathophysiological and psychosocial aspects of assessment and management for selected acute and emergent problems of adult patients/clients with complex illness, including multi-faceted assessment, health history, and diagnostic reasoning skills, with emphasis on social, cultural, and developmental influences. Integration of knowledge of caregiver, therapeutic interventions, and communication concepts as applied to care of medical and surgical adult patients. Experimental practicum experience within setting of multidimensional team, with focus on clinical interpretation of assessment and diagnostic data for purpose of planning, implementing, and evaluating nursing care for medical and surgical patients. Letter grading.

162. Advanced Leadership and Role Integration. (5) Lecture, five hours. Leadership and management theories and models, resource allocation and management, delegation, conflict resolution, leadership-management of care as transition is made from student role to that of practicing professional nurse. Preparation for national certification. Letter grading.


170. Research. (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 an individual aid, physical assessment skills practice in laboratory, and required text mandatory. Letter grading.

171. 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 an individual aid, physical assessment skills practice in laboratory, and required text mandatory. Letter grading.

173. Introduction to Research. (4) Lecture, four hours. Introduction to planning research project based on simple question. Specific components of research activities analyzed: specific aims and study purpose, variable definition, sample selection, data collection tools, data analyses, and ethical conduct in research studies. Critique of research reports. P/NP or CR/NC 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 an individual aid, physical assessment skills practice in laboratory, and required text mandatory. Letter grading.

152W. Human Development/Health Promotion in Culturally Diverse Populations. (5) Lecture, four hours; discussion, two hours. Enforced requisites: English Composition 3 or 3H or English as a Second Language. An introduction to the study of human development including issues related to contraception and parentage; well-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 political, societal, and governmental systems within U.S. Satisfies Writing II requirement. Letter grading.

C155. Global Health Elective: Globalization, Social Justice, and Human Rights. (3) (Not same as course C155 prior to Fall Quarter 2011.) Seminar, two hours. Exploration of theories, issues, debates, and pedagogy associated with globalization, social justice, and human rights and how these perspectives influence human health and well-being. Provides students with unique opportunity to explore these topics within classroom, via Internet and other technologies, and in other classrooms located around globe. Students through collaborative projects with peers around world, reflects on how globalization shapes and transforms local and national cultures. Currently scheduled with course C255. Letter grading.

160. Secondary Prevention. (4) Formerly numbered C160. Lecture, four hours. Requisite: course 152W. Corequisite: course 161. Screening and early detection of illness to prevent chronic or acute deteriorating illness. Expanding on concepts of health and human development and using nursing process, application of nursing role in providing care to individuals and their families to screen, diagnose, and treat illness at earliest possible time to prevent disability or prematurity mortality. Examination of health problems of individual family, social and community systems, and interdisciplinary healthcare systems. Emphasis on differences in developmental stages in response to screening for early and late signs and symptoms of illness in ambulatory care of community and acute care settings, community agencies, rehabilitation units, outpatient specialty clinics and surgical units, and home and community settings. Letter grading.

as well as detailed physical examination techniques. Individual study, use of audiovisual aids, physical assessment and 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. 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 Nursing. (1) Seminar, one hour. Designed to bring together students under-taking supervised tutorial research in seminar setting with one or more faculty members to discuss their own work or related work in discipline. Led by one supervising faculty member. May be repeated for credit. P/NP grading.

193. Journal Club or Speaker-Series Seminars: Nursing. (1) Seminar, two hours; outside study, four hours. Limited to undergraduate students. Discussion of 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 per week per unit. Limited to junior/senior Nursing majors. Inquiry into 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 Nursing. (2 to 4) Tutorial, one hour. Open to upper division majors in individual intensive study, with scheduled meetings to be arranged between faculty member and student. Assigned reading and tangible evidence of mastery of subject matter required. May be repeated for credit. Individual contract required. P/NP or letter grading.

199. Directed Research or Senior Project in Nursing. (2 to 4) Tutorial, two hours. Limited to juniors/seniors. Supervised individual research or investigation under guidance of supervising faculty member. 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 science as context for study of philosophies 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. Preparation: one upper division statistics course. Introduction to applied statistics, including design, analysis of variance, correlation techniques, and regression. Sample size calculations, t-tests, one-way and two-way ANOVA, and concepts of database design, management using statistical package programs. Letter grading.


204. Research Design and Critique. (4) Lecture, 90 minutes; discussion, 90 minutes. Requisite: course 173 or equivalent upper division basic research methodology course. Complex research designs and analysis of multiple variables, and research design. Emphasis on techniques for control of variables, data analysis, and interpretation of results. Analysis in depth of interrelationship of theoretical frameworks, descriptive and inferential statistics, and data analysis techniques. Content discussed in terms of clinical nursing research problems and how they apply to clinical settings. Letter grading.

205A. Introduction to Qualitative Methods in Research. (4) Lecture, 90 minutes; discussion, 90 minutes. Requisite: course 202. Introduction to qualitative research design in nursing science. Examination of major methodologies that guide qualitative research in relation to various strategies for research on assessment and intervention, with emphasis on grounded theory methodology as guide to study design development, including sampling plan, interview strategies for data collection, and basic coding. Exploration of self-reflexivity and ethics in relation to entrée to field, recruitment of pilot study participants, interviewing, and preliminary data analysis via analytic, iterative, reflexive, and emergent data analysis. Letter grading.

205B. Advanced Qualitative Research Methodology I. (4) Lecture, four hours. Requisites: course 205A, submission of OPRIS application for small pilot study in fall of second year. In-depth analysis of symbolic interactionism and pragmatism as foundation for study of grounded theory methodology as guide to study design development, including sampling plan, interview strategies for data collection, and basic coding. Analysis of definition of key terms and integrat- ing analytical concepts based on pilot study data collected as part of course. Letter grading.

205C. Advanced Qualitative Research Methodology II. (4) Lecture, four hours. Requisite: course 205B. Advanced techniques for simultaneous collection and analysis of qualitative data. Expansion on traditional grounded theory analysis procedures by learning and applying situational analysis and constructivist grounded theory techniques to analysis of data. Development of coding of observation (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. Requisite: course 205B. Exploration of theoretical and conceptual thinking in nursing and issues that continue to influence development of nursing knowledge and nurs- ing science. Application of analytical and evaluative skills fundamental to development of theory in nursing and integral to use of theory in nursing research. Let- ter grading.

207. Quantitative Research Designs of Clinical Phenomena. (4) Lecture, three hours; discussion, one hour. Introduction to wide array of quantitative research designs for testing clinical nursing phenomena. Emphasis on dynamic interaction between research process and theory, as well as on appropriate use of experimental, quasi-experimental, and correlational designs among diverse populations. Approach- es for evaluation of validity of various research de- signs, with attention to threats to validity of each design. Letter grading.


210. Nursing Science. (4) Formerly numbered 210A). Lecture, four hours. Designed for Ph.D. stu- dents. Exploration of phenomena of interest to nurse scholars from past to present and future. In relation to proposed domains of nursing (person, environment, health, and nursing), investigation of state of science in nursing, with special focus on health service, bio- behaviors, and vulnerable populations in nursing research. Integration and synthesis of current and historical scholarly findings of particular phenom- ena in literature to identify meaningful gaps in knowl- edge and directions for future research. Letter grad- ing.

211. Theoretical Foundations of Women's Health- care during Reproductive Years. (2 to 4) Lecture, three hours; discussion, one hour. Theory and re- search on assessment and intervention of women's health issues during reproductive years. Clinical top- ics include gynecology, family planning, pregnancy, and postpartum care, with emphasis on health pro- motion of women during reproductive years in prima- ry care settings. 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; consider- ation of cross-cultural views of families as well. Identi- fication of limitations of current theory and research related to family study and applicability of current knowledge to various problems encountered in care of families. Letter grading.


216A-216B-216C. Adult/Gerontology Concepts for Advanced Practice Nurses in Acute Care I, II, III. (4-4-4) Lecture, four hours. Enrolled requisites: courses 200, 211. Enrolled prerequisite 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
224. Pharmacology for Advanced Practice Nurses. (5) Lecture, five hours. Requisite: course 231. In preparation for roles that require focus on drug classes and their mechanisms of action, pharmacokinetics, adverse effects, and clinical uses. Advanced knowledge of and skills in pharmacology for clients/patients with stable acute or chronic conditions. Focus on major drug classes and their mechanisms of action, pharmacokinetics, adverse effects, and clinical uses. Letter grading.

225A. Advanced Pharmacology I. (3) Lecture, two hours. Course 225A is enforced requisite to 225B. Basic pharmacological principles in addition to clinical knowledge and skills in pharmacology for clients/patients with stable acute or chronic conditions. Focus on major drug classes and their mechanisms of action, pharmacokinetics, adverse effects, and clinical uses. Letter grading.

225B. Advanced Pharmacology II. (2) Lecture, two hours. Enforced requisite: course 225A. Knowledge of and skills in pharmacology necessary for care of clients/patients with stable acute or chronic conditions. Letter grading.

226. Seminar: Aging Research. (1 to 2) Seminar, two hours. Preparation: completion of first-year coursework. Discussion and conceptualization of gerontological nursing concepts within context of specialty areas of research (acute care, oncology, occupational health, and gerontological nursing). Provides opportunity for students to integrate gerontological nursing concepts into their evolving dissertation research. Exploration of differences in their areas of focus. Core faculty from all specialty areas participate in discussions. May be repeated for maximum of 10 units. S/U grading.

227. Ethnogeriatric Nursing. (4) Lecture, three hours. Requisite: course 209. Identification of unique content related to minority aging using Giger and Davidhizar transcultural Assessment Model. Examination of transcultural nursing competencies necessary for conducting research that is both client centered and research focused. Exploration of difference between Eurocentric lens and geroethnic lens when providing nursing care to ethnically and racially diverse elders. In-depth examination of issues related to conducting research with elders who are racially and ethnically diverse in variety of healthcare settings. Study designs for conducting research, issues surrounding informed consent of minority elders, and data collection techniques, including critique and use of data collection instruments used in community and long-term care settings, behavioral observations, interviews, and surveys. Letter grading.

228. Research Methods for Aging Populations. (4) Lecture, three hours. Requisites: courses 204, 205A, 207. Corequisite: course 208. In-depth examination of issues related to conducting research with elders in variety of healthcare settings. Study designs for conducting research in community and long-term care settings, issues surrounding informed consent, planning for mortality and morbidity, data collection techniques for frail elders, including use of assessment tools used in community and long-term care settings, behavioral observations, interviews, and surveys, and statistical analysis techniques related to missing data, longitudinal data analysis, clustering, and repeated measures. Letter grading.

229A-229B-229C. System-Based Healthcare I, II, III. (3 units each) Lecture, one hour of seminar per week. System-based healthcare where students focus on context of medical decision making, including team, hospital, culture, politics, economics, law, and personal bias. Topics include legal pressures, and moral aspects of sexual assault and abortion; economics and cultural considerations involved in end of life decision making; and public and personal interpretation of what constitutes conflict of interest. The impact of medical decisions is influenced by context of care (system-based practice) and emotional responses and preferences (professionalism). S/U grading.

230A-230B. Advanced Pathophysiology I, II. (3-2) Lecture, three hours; laboratory (2 hours) (course 230B). Requisite: course 105 or equivalent taken within past five years. Course 230A is requisite to 230B. In-depth examination of pathophysiological processes that underlie human illness and disease, with detailed study of these in major body systems. Response to, processes of cellular and molecular pathology at extra- cellular, system, and human levels. Letter grading.

231. Pathophysiology for Advanced Practice Nurses. (4) Not same as course 231 prior to Fall Quarter 2010.) Lecture, four hours. In-depth examination of pathophysiological processes that underlie human illness and disease, with detailed study of these in major body systems. Analysis of manifestations of, and responses to, processes of cellular and molecular pathology at extracellular, system, and human levels with implications for advanced practice nursing. Letter grading.

232. Human Responses to Aging and Chronic Illness. (4) Lecture/discussion, four hours. Pathophysiological concepts and nursing management of older adults who are healthy or who have disability and/or chronic illness. Nursing aspects of selected dysfunctions and implications for advanced practice in gerontological nursing. Letter grading.

232F. Human Responses to Aging and Chronic Illness. (4) Lecture/discussion, four hours. Biopsychosocial concepts and nursing management of healthy, disabled, and/or chronically ill older adults, addressing pathophysiological aspects of common health problems. Implications for advanced practice in gerontological nursing. Letter grading.

233. Human Responses to Aging and Chronic Illness. (4) Lecture/discussion, four hours. Biopsychosocial concepts and nursing management of healthy, disabled, and/or chronically ill older adults, addressing pathophysiological aspects of common health problems. Implications for advanced practice in gerontological nursing. Letter grading.


practice settings which include culturally diverse pop-
ulations, consultation theory, change theory, and
cialist practice, including systems theory, behavioral
hours. Theoretical foundations of clinical nurse spe-
dication of context of healthcare financing, limited
prove outcomes in culturally competent manner. Pre-
duced quality of life among underserved, low income,
turally appropriate interventions. Unmet healthcare
ings that limit access to those in greatest need of cul-
turally appropriate interventions. Unmet healthcare
ings often result in health disparities and compro-
mised healthcare access and outcomes. Concepts of
uninsured, marginalized populations. Analysis of cur-
tence-based strategies and interventions de-
igned to address these clinical problems and im-
prove health outcomes. Repeated exposure to course 252.
Corequisite: course 225A. Screening and early detec-
tion of illness to prevent chronic or acutely deteriorat-
ing illness. Expanding on concepts of health and hu-
man development, application of nursing role in providing
care to individuals and their families to screen, diagnose, and treat ill-
ness at earliest possible time to prevent disability or premature death.
Corequisite: course 225A. Screening and early detec-
tion of illness to prevent chronic or acutely deteriorat-
ing illness. Expanding on concepts of health and hu-
man development, application of nursing role in providing care to individuals and their families to screen, diagnose, and treat illness at earliest possible time to prevent disability or premature death.
Corequisite: course 225A. Screening and early detection of illness to prevent chronic or acutely deteriorating illness. Expanding on concepts of health and human development, application of nursing role in providing care to individuals and their families to screen, diagnose, and treat illness at earliest possible time to prevent disability or premature death.
Corequisite: course 225A. Screening and early detection of illness to prevent chronic or acutely deteriorating illness. Expanding on concepts of health and human development, application of nursing role in providing care to individuals and their families to screen, diagnose, and treat illness at earliest possible time to prevent disability or premature death.
Corequisite: course 225A. Screening and early detection of illness to prevent chronic or acutely deteriorating illness. Expanding on concepts of health and human development, application of nursing role in providing care to individuals and their families to screen, diagnose, and treat illness at earliest possible time to prevent disability or premature death.
Corequisite: course 225A. Screening and early detection of illness to prevent chronic or acutely deteriorating illness. Expanding on concepts of health and human development, application of nursing role in providing care to individuals and their families to screen, diagnose, and treat illness at earliest possible time to prevent disability or premature death.
comes such as organizational support, effective teamwork, and quality-improvement concepts in workplace, leadership, critical thinking, and decision-making. Preparation: completion of research and protection of re- verse outcomes, evidence-based clinical and cost- control decision making, patient safety and risk re- duction, resource management, and external impacts on quality control. Letter grading.

M273. Acupuncture and 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, ecolo- gy, health, and illness. Bases for written critical analy- sis and class discussion provided through key theo- retical works. S/U or letter grading.


295A. Nursing Research Seminar. (1) Seminar, one hour. Introduction to nursing research methods, acti- vities, and programs within specialty strands at UCLA School of Nursing: biobehavioral sciences, biologic sciences, health administration/vulnerable populations, and health services. Exemplar work of UCLA nurse scholars highlighted, Overview of nursing research at UCLA and potential research opportunities for doctor- al study. S/U grading.

295B-295C. Nursing Science Seminars. (2-2) Semi- nar, 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 or- ganization funding sources, and evaluation criteria identified. Role of external funding to facilitate doctor- al and postdoctoral research, research activities, and professional development. S/U grading.

M296. Interdisciplinary Response to Infectious Disease Emergencies: Nursing Perspective. (4) (Same as Community Health Sciences M256, Medi- cine M256, and Oral Biology M256.) Lecture, three hours; discussion, three hours. Designed to instill in pro- fessional students ideas of common emergency health problems and coordinated response, with spe- cific attention to bioterrorism. Examination of tools to help students prevent, detect, and intervene in infect- ious disease emergencies. Interdisciplinary sessions also attended by students in Schools of Dentistry, Medicine, and Public Health during weeks two through five. Letter grading.

299A. Nursing 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 re- search subjects. S/U grading.

299B-299C. Nursing Research/Laboratory Experi- ences. (4-4) Seminar/discussion, one hour; research/ laboratory, three hours. Requisites: courses 202, 206. Seminar-discussion-based experiences to assist students to prepare for careers as scientists, with focus on research methodology and mentorship. S/U grading.

299D. Nursing Education Seminar. (2) Seminar, two hours; discussion; one to two hours. Seminar to assist students to prepare for careers in academic set- tings, with focus on teaching. S/U grading.

375. Teaching Apprentice Practicum. (1 to 4) Semi- nar, to be arranged. Apprentice persons can gain per- sonal employment as teaching assistant, associate, or fellow. Teaching apprenticeship under active guid- ance and supervision of regular faculty member re- sponsible for course. May be repeated for credit. S/U grading.

414A-414B. Clinical Practicum: Adult/Gerontology Acute Care Nurse 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. As- sessment and therapeutic interventions in oncology settings with diverse adult/gerontology populations. Assessment and therapeutic interventions in oncology settings with diverse adult/gerontology populations. Preparation in various clinical settings to implement evidence-based practice guidelines and to critically analyze and adapt health- care interventions based on individualized assessments of individual/family needs. Focus on context of community, cultural awareness, and practice in interdisci- plinary teams. Letter grading.

429C-429D-429E. Family Nurse Practitioner Practicum III, IV, V. (6-6-6) Clinic practicum, 18 hours (courses 429C, 429D) and 27 hours (course 429E). Requisite for course 429C: course 428B; for 429D: course 429C; for 429E: course 429D. Third, fourth, and fifth of five clinical practica 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 development- al transitions. Preparation in variety of clinical set- tings to implement evidence-based practice guide- lines and to critically analyze and adapt healthcare in- terventions based on individualized assessments of individual/family needs. Focus on context of commu- nity, cultural awareness, and practice in interdisci- plinary teams. Letter grading.


439A. Adult/Gerontology Primary Care Nurse Practitioner Practicum I. (4) Clinic practicum, 12 hours. Corequisite: course 423A. Advanced practice nursing in adult/ger- ontology. Beginning-level assessment and therapeu- tic interventions for health problems in selected popu-
lations. Developmental, health promotion, and maintenance needs of clients in relation to family, social, and community structures. Letter grading.

439B. Adult/Gerontology Primary Care Nurse Practitioner Practicum II. (6) Clinic practicum, 18 hours. Requisite: course 439A. Corequisite: course 239B. Continuation of course 439A for advanced practice nurses, with focus on assessment and intervention in common illness-associated symptoms and complex patient/family presentations. Developmental needs of clients in relation to family, social, and cultural structures. Letter grading.


439D. Adult/Gerontology Primary Care Nurse Practitioner Practicum IV. (6) Clinic practicum, 18 hours. Requisites: courses 239A, 239B, 439C. Adult/Gerontology primary care practice role where students assume primary responsibility for planning, managing, and evaluating care of clients in specialized settings. Emphasis on application of basic knowledge and developmental knowledge to goals of multidisciplinary healthcare teams. Letter grading.

439E. Adult/Gerontology Primary Care Nurse Practitioner Practicum V. (6) Clinic practicum, 27 hours. Enforced requisite: courses 439A through 439D. Designed to prepare adult/gerontology primary care nurses with knowledge, skills, and competencies necessary to assume role of primary healthcare providers for young adults, adults, and older adults. Use of patient-centered framework of care for those who experience common acute and chronic illnesses and disabilities, and developmental transitions. Preparation in variety of clinical settings to implement evidence-based practice guidelines and to critically analyze and adapt healthcare interventions based on individualized assessments, with emphasis on context of community, cultural awareness, and practice in interdisciplinary teams. Letter grading.

440. Advanced Assessment and Clinical Diagnosis Practicum. (2) Laboratory/clinic practicum, six hours. Practical application of advanced physical assessment and clinical diagnostic reasoning. Students conduct individualized patient- and symptom-focused assessments of health problems representative of diverse pathophysiologic processes; emphasis on comprehensive and integrated critical analysis of symptom and focused history data, physical examination, selected laboratory data, and clinical diagnoses. Letter grading.


444. Adult/Gerontology Acute Advanced Assessment and Clinical Diagnosis II. (2) Clinic practicum, six hours. Enforced requisite: course 440. Practice foundations for advanced physical assessment and clinical diagnostic reasoning, with focus on diagnostic or therapeutic procedures and related indications, complications, and follow-up care in laboratory setting. S/U grading.


462. Maternity Nursing. (5) Lecture, three hours; clinical, six hours. Requisite: course 461. Pathophysiologic and psychosocial aspects of assessment and management of pregnancy and emergent problems of maternity newborn patients, with emphasis on emotional, social, cultural, and developmental influences and integration of basic knowledge of pathophysiology, diagnostics, pharmacology, therapeutic interventions, and communication concepts as applied to care of childbearing families. Application of theory, nursing process, evidence-based practice, and problem solving in interpretation of assessment and diagnostic data for purpose of planning, implementing, and evaluating care for maternity and newborn patients, both as individuals and cohorts. Assessment, care planning, implementation, and management of symptomatology among childbearing women and newborns. Letter grading.


465A. Foundational Concepts for Tertiary Prevention and Care of Medical-Surgical Patients and Families. (4) (Formerly numbered 463.) Lecture, three hours; clinical, three hours. Corequisite: course 254B. Examination of nursing assessment and management of common medical-surgical problems of adults. Theory considers in basic assessment, health history, and diagnostic reasoning for selected health problems, with emphasis on social, cultural, and developmental influences. Integration of basic knowledge of pathophysiology, stress and adaptation, adult development theory, therapeutic interventions, and communication concepts as applied to care of medical and surgical patients across acute and chronic illness. Introduction to concept of nurses as bedside scientists, with emphasis on critical and contextual thinking skills and diagnostic reasoning. Nursing process, ethical principles, practice guidelines, evidence-based practice, and clinical thinking that maximize patient safety and quality care for older adults employed during clinical experiences. Diagnosis and management of healthcare problems managed by master’s-level clinical nurses in acute care settings. Letter grading.

465B. Tertiary Prevention and Care of Medical-Surgical Geriatric Patients and Families. (5) Lecture, five hours; clinical, 12 hours. Requisites: courses 465A, 465B. Pathophysiological and psychosocial aspects of assessment and management for selected problems of adult patients with complex illness, including multifaceted assessment, health history, and diagnostic reasoning skills and emphasis on social, cultural, and developmental influences. Integration of knowledge of pathophysiology, diagnostics, pharmacology, therapeutics, and communication concepts as applied to care of older medical and surgical patients and their families. Concept of nurses as bedside scientists, with emphasis on critical and contextual thinking skills and diagnostic reasoning. Supervised practicum experience, clinical research, evidence-based practice, and clinical thinking that maximize patient safety and quality care for older adults employed during clinical experiences. Diagnosis and management of healthcare problems managed by master’s-level clinical nurses in acute care settings. Letter grading.

465C. Tertiary Prevention and Control of Medical-Surgical Pathologies: Respiratory System. (Formerly numbered 465.) Lecture, five hours; clinical, 12 hours. Requisites: courses 465A, 465B. Pathophysiological and psychosocial aspects of assessment and management for selected problems of adult patients with complex illness, including multifaceted assessment, health history, and diagnostic reasoning skills and emphasis on social, cultural, and developmental influences. Integration of knowledge of pathophysiology, diagnostics, pharmacology, therapeutic interventions, communication concepts as applied to care of medical and surgical patients. Supervised practicum experience, clinical research, evidence-based practice, and clinical thinking that maximize patient safety and quality care for older adults employed during clinical experiences. Diagnosis and management of healthcare problems managed by master’s-level clinical nurses in acute care settings. Letter grading.


468. 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 evaluative management and developmental strategies.

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.
Obstetrics and Gynecology

David Geffen School of Medicine

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Chairs
Bartly J. Mondino, M.D. (Bradley R. Straatsma, M.D., Endowed Professor of Ophthalmology), Chair
Anne L. Coleman, M.D., Ph.D. (Fran and Ray Stark Foundation Professor of Ophthalmology), Vice Chair
Sherwin J. Isenberg, M.D. (Laraine and David Gerber Professor of Ophthalmology), Vice Chair, Harbor-UCLA

Scope and Objectives
Ophthalmology is the medical science that encompasses knowledge concerning the eye 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 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 eye and related structures, and for education in the broad field of ophthalmology.

The Department of Ophthalmology provides instruction to medical students during the first, 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 and a listing of the courses offered, see http://www.jsei.org/education/.

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

School of Dentistry

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Fariba S. Younai, D.D.S., Vice Chair

Professors
Carol A. Bibb, Ph.D., D.D.S.
Francesco Chiappelli, Ph.D.
Robert H. Chiu, M.S., Ph.D.
Susan Kinder Haake, Ph.D., D.M.D.
Dean Ho, Ph.D.
Anahid Javitt, M.P.H., Ph.D.
Mo K. Kang, M.S., Ph.D., D.D.S.
Diana V. Messadi, M.M.Sc., D.D.S., D.M.S.
Ichiro Nishimura, D.D.S., D.M.D.
Wenyuan Shi, Ph.D.
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Professor Emeritus
Douglas Junge, Ph.D.

Associate Professors
Shen Hu, Ph.D.
Kenneth T. Miyasaka, M.S., Ph.D., D.D.S.

Assistant Professors
Yuemin Christine Hong, D.M.D.
Reuben Kim, D.D.S.
Clarice Law, D.M.D.
Renate Lux, Ph.D.

Adjunct Professors
Cari A. Maita, M.A., Ph.D.
Robert Merrill, D.D.S.

Adjunct Associate Professors
Yang Kim, Ph.D.
Ki-Hyuk Shin, M.S., Ph.D.
Craig D. Woods, D.D.S.

Adjunct Assistant Professor
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, molecu-
lar 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://grad.ucla.edu/gasnr/. 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. Ontogenesis. (3 Lecture, three hours. Evolutionary perspective of cellular development from simple molecules that formed during first billion years of Earth to development of cells, tissues, and organs of invertebrates and vertebrates. Development of vertebrate feeding apparatus from comparative anatomical and physiological point of view, followed by embryogenesis of orofacial and dental structures of humans. S/U or letter grading.

201C. Pathobiology. (3 Lecture, three hours. Molecular basis for pathogenic processes in tissues of oral cavity. Topics include microbiology, medially, development and mineralization of hard tissues, soft tissue infections, carcinogenesis, colonization of mucosal substrates by opportunists, etc. S/U or letter grading.


205A. Methodology in Research Design and Data Analysis. (2 Lecture, two hours. Designed for graduate oral biology students. Integration of didactic lectures in descriptive and inferential statistics and in research design (emphasis on experimental design), presentations of statistical software, and open discussion of specific needs of oral biology students when they design their research. Letter grading.


205C. Advanced Seminar: Comparative Effectiveness (Evidence-Based). (2 Seminar, one hour; discussion, one hour. Requisites: courses 205A, 205B (may be taken concurrently). Hands-on experience in process of systematic review, as shared mechanism in comparative effectiveness and evidence-based research. Specialized topics include level and quality of evidence assessments, acceptable sampling analysis, meta-analysis and meta-regression, and Bayesian-derived decision making following utility versus logic model. Students work on examples of their choice and interest in oral biology, medicine, and oral and maxillofacial surgery. Letter grading.

206. Current Topics in Oral Immunology. (2 Lecture, two hours. Preparation: basic immunology. Discussion and analysis of current research dealing with immunological aspects of oral biology, including: HIV, opportunistic oral infections, periodontal pathology, oral immunopathology, carcin research, and oral oncology, etc. Letter grading.

208. Genomics and Proteomics in Oral Biology Research. (2 Lecture, one hour; discussion, one hour. Introduction to fundamentals and technical aspects of genomics and proteomics and analysis of data derived therewith. Discussion of implications and applications of genomics and proteomics in diagnostic protocols such as salivary diagnostics. Letter grading.

209. Scientific Ethics. (2 Seminar, two hours. Required course in scientific ethics for graduate students in Oral Biology M.S. and Ph.D. programs and for NRSAs trainees in School of Dentistry. Letter grading.

211. Biology of Temporomandibular Joint. (2 Lecture, two hours. Anatomy, histology, physiology, and biomechanics of the temporomandibular joint (TMJ) and related musculature. Pain mechanisms, sensorimotor integration, and motor mechanisms in TMJ function, and current methods of TMJ imaging. S/U or letter grading.

212. Proseminar: Oral Biology Research. (2 Seminar, one hour; discussion, one hour. Introductory course for graduate M.S. students. Guest seminars on topics of research in oral biology (pain pathways, immunology, stem cell changes, osteoimmunology, etc.) and related musculature. Pain mechanisms, sensorimotor integration, and motor mechanisms in TMJ function, and current methods of TMJ imaging. S/U or letter grading.

214. Current Research in Osteoimmunology. (2 Seminar, one hour; discussion, one hour. Exploration of oral bone biology and immunology and how both systems talk to each other. Topics include immune modulation of bone metabolism, osteoblastic niche for hematopoietic progenitors, adult bone marrow stem cell changes, and osteoimmunology in at-risk populations. Letter grading.

215A. Fundamentals of Immunology. (2 Lecture, two hours. Basic cellular and molecular mechanisms involved in regulatory immune effects, with emphasis on immunopathology 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-led discussions of current cutting-edge research developments in immunology. Letter grading.

220. Oral Biology Seminar. (2) Seminar, two hours; literature review, one hour. An advanced course on oral biology research and practice. Letter grading.

222. Dental Pharmacology and Therapeutics. (2 Lecture, three hours. Survey of pharmacology, with particular emphasis on drugs used in dentistry. General principles of drug action and drug effects on autonomic and central nervous systems. S/U or letter grading.

223. Applied Social Sciences 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 of examples of their choice and interest in oral biology, medicine, and 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.

M256. Interdisciplinary Response to Infectious Disease Emergencies: Dentistry Perspective. (4 Formerly numbered M256D) Seminar, two hours. Designed for graduate students. Psychological and physiological processes interwoven, and one important aspect of psychoneuroimmunological research is characterization of mechanisms that underlie these interactions. Examination of current literature on neuroimmune interactions from developmental perspective. S/U or letter grading.

277. Current Topics in 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 on immune surveillance and lymphatic drainage of oral pathologies associated with AIDS and other diseases. Letter grading.

278. Current Topics in Oral Biology. (2 Lecture, two hours; literature review, one hour. An advanced course on prokaryotic and eukaryotic molecular and cellular biology, with emphasis on applications in dental research. Letter grading.

596. Directed Individual Study or Research. (2 to 8) Lecture, one hour; discussion, one hour. Project for advanced individuals. Letter or S/U grading.

597. Preparation for Ph.D. Qualifying Examinations. (4 to 8) Tutorial, to be arranged. S/U or letter grading.


ORTHOPAEDIC SURGERY
David Geffen School of Medicine

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http://ortho.ucla.edu

Chairs
Jeffrey Eckardt, M.D., Chair
John S. Adams, M.D., Vice Chair of Research

Scope and Objectives
The medical student program in orthopaedic surgery is designed to provide experience in understanding the diagnosis and management of disorders of the musculoskeletal system. Through a combination of didactic instruction and supervised clinical experience, students acquire the clinical skills of history taking and physical examination of the musculoskeletal system. Diagnosis and orthopaedic management of bone and soft tissue trauma, skeletal development defects, tumor, spinal disorders, hand and foot disorders, and arthritis are primary objectives. Third-year students work in ambulatory clinics and on inpatient services during their core surgical clerkship. Fourth-year electives provide the opportunity for in-depth experience on rotations at the Reagan UCLA Medical Center and affiliated institutions and emphasize subspecialties such as joint replacement, sports medicine, orthopaedic oncology, metabolic bone disorders, hand and foot surgery, spinal surgery, and pediatric orthopaedics.

For further details on the Department of Orthopaedic Surgery and a listing of the courses offered, contact the Education Office at (310) 825-6557 or see http://ortho.ucla.edu.

Orthopaedic Surgery
Upper Division Course
199. Directed Research in Orthopaedic Surgery. (2 to 8) Tutorial, two hours. Limited to juniors/seniors. Supervised individual research or investigation under guidance of faculty mentor. Cumulating paper required. May be repeated for credit. Individual contract required. P/NP or letter grading.

e-mail: dsmoot@mednet.ucla.edu
http://pathology.ucla.edu/body.cfm?id=398

Jonathan Braun, M.D., Ph.D., Chair

Professors
Linda G. Baum, M.D., Ph.D.
Scott W. Binder, M.D. (Pritzker Family Endowed Term Professor of Pathology)
Jonathan Braun, M.D., Ph.D.
Alistair J. Cochran, M.D.
Gay M. Crooks, M.D.
Kenneth A. Dorshkind, Ph.D.
Thomas A. Drake, M.D., in Residence
Steven M. Dubinett, M.D.
Rita B. Effros, Ph.D., in Residence
Michael C. Fishbein, M.D., in Residence (Frances and Albert Piansky Professor of Anatomy)
Samuel Wheeler French, Jr., M.D., Ph.D., in Residence
Tomas Ganz, M.D., Ph.D.
Richard A. Gatti, M.D., in Residence (Rebecca Smith Professor of A-T Research)
Ben J. Glasgow, M.D. (Wasserman Professor of Ophthalmology)
Wayne W. Grody, M.D., Ph.D.
Oliver Hankinson, Ph.D.
Jiaofu Huang, M.D., Ph.D., in Residence
Kathleen A. Kelly, Ph.D., in Residence
Jerzy 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.
Benhur Lee, M.D.
Xinmin Li, Ph.D.
Jian Yu Rao, M.D.
Elaine F. Reed, Ph.D., in Residence
Jonathan W. Said, M.D.
Robert H. Schiestl, Ph.D.
Michael A. Teitell, M.D., Ph.D. (Lya and Harrison Latta Endowed Professor of Pathology)
James G. Tidball, Ph.D.
Peter J. Tontonoz, M.D., Ph.D.
Harry V. Vinters, M.D.
Hanlin L. Wang, M.D., Ph.D.
Anna M. Wu, Ph.D.

Professors Emeriti
Judith A. Berliner, Ph.D.
John Campbell, Ph.D.
Pasquale A. Cancilla, M.D.
Michael J. Cecka, Ph.D.
Carmine D. Clemente, Ph.D.
Walter F. Coulson, M.D.
Joseph M. Mirra, M.D.
Faramarz Naeim, M.D.
Roberta K. Nieberg, M.D.
Donald E. Paglia, M.D.
Dennis Rodgerson, M.D.
Lawrence D. Petz, M.D.
David D. Porter, M.D.
Nora Sun, M.D.
Lawrence E. Stryker, M.D.
Mitsuo T. Takasugi, Ph.D.
M. Anthony Verity, M.D.
Julian L. Van Lancker, M.D.
M. Elena Stark, M.D., Ph.D.
Eugene E. Villella, M.D.
Elizabeth A. Wagar, M.D.

Associate Professor
Xin Liu, M.D., Ph.D.

Assistant Professors
Steven J. Bensinger, V.M.D., Ph.D.
David W. Dawson, M.D., Ph.D., in Residence
Dinesh S. Rao, M.D., Ph.D.

Adjunct Professors
Sunita M. Bhuta, M.D.
David S. Chia, Ph.D.
David W. Gjertson, Ph.D.
Bogdan Pasaniuc, Ph.D.
M. Elena Stark, M.D., Ph.D.
Robert B. Trelease, Ph.D.

Adjunct Associate Professors
Lee A. Goodglick, Ph.D.

Joseph M. Miller, Ph.D.
David B. Seligson, M.D.
Bo Wei, M.D., Ph.D.
Johathan J. Wisco, Ph.D.

Adjunct Assistant Professors
Halliang Hu, Ph.D.
James P. Lister, Ph.D.
Stephen P. Schettler, Ph.D.
Yin Sun, Ph.D.
Madhuri Wadehra, Ph.D.

Visiting Professor
Raymond L. Barnhill, M.D.

Visiting Associate Professor
Claire Lugassy, M.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://pathology.ucla.edu/body.cfm?id=398 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://grad.ucla.edu/gradaa. 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 Courses
110. Introduction to Cytogenetics. (4) Lecture, one hour; discussion, two hours. Limited to upper division biology students. Cytogenetics is branch of genetics concerned with study of structure and function of cells, especially chromosomes. Coverage of broad range of topics on both clinical aspects and research in cytogenetics. Studies provide important paradigms to understand structure of chromosomes, mechanisms of chromosome segregation, diseases, and problems created for numerical and structural abnormalities of human chromosomes as well as study of new techniques in molecular cytogenetics, including fluorescence in situ hybridization (FISH), comparative genomic hybridization (CGH), and array CGH to diagnose constitutional syndromes and cancer. Journal

PATHOLOGY AND LABORATORY MEDICINE
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Graduate Courses


222. Hematopoiesis: Basic Biology and Clinical Implications. (4) Lecture, three hours; discussion, one hour. Senior undergraduate students considered on case by case basis. In-depth study of concepts and paradigms in hematopoietic development. Examination of hematopoiesis and normal development, with focus on molecular regulation of cellular development and equal emphasis on conceptual and experimental aspects of knowledge in field. Discussion of important pathological states within hematopoietic system, as well as established and novel avenues for therapy. Topics include hematopoietic stem cells and niche, transcriptional and epigenetic regulation of hematopoiesis, B- and T-lymphocyte development, myeloid, erythroid, and platelet development, immune responses, myeloid and lymphoid neoplasia, and bone marrow transplantation/gene therapy. S/U or letter grading.

M229. Molecular Mechanisms of Host/Pathogen Interaction. (4) Same as Microbiology M229. Lecture, two hours; laboratory, two hours. Preparation: Basic Microbiology 254A through 254D. Molecular mechanisms of microbial interactions with eukaryotic host cells that result in disease or pathogen survival. Topics include immune responses of common causes of infection, Veterinary, fungi, and parasites, basis of toxin-mediated cellular damage, and immune suppression of microbiol 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 questions in disease mechanisms from experimental and conceptual understanding of mechanisms. Identification of important questions still remaining unanswered. Letter grading.

238. Histology and Pathology for Graduate Students. (2) Laboratory, two hours. Designed for UCLA ACCESS or Cellular and Molecular Pathology Ph.D. students. Basic introductory knowledge of normal tissue, pathologic processes, and animal models as observed in 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 postgraduate 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 subject areas and presentation of current trends in experimental design. Letter grading.


M259. Molecular Nutrition and Genetics Epidemiology of Obesity and Diabetes. (4) Same as Epidemiology M259. Lecture, four hours. Preparation: basic biochemical, molecular biology, physiology, and statistics courses. Survey of current knowledge of nutritional, biochemical, and genetic aspects of obesity and diabetes, and their microvascular and macrovascular complications. Review of descriptive and analytical epidemiology of obesity and diabetes. Study of distribution and determinants of obesity-related 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 epidemiologic methods. Techniques and principles of molecular genetics relevant to current understandings of obesity and diabetes. Analysis of real data sets that include both genotype and phenotype information, with emphasis on examination of various environmental interactions. S/U or letter grading.

260. Immunopathology. (4) Lecture, two hours; discussion, one hour; laboratory, one hour. Requisite: Microbiology 261. Advanced information on adaptive and innate immune responses of immunocompetent individuals with a focus on the immune system, lymphoid development, acute and chronic inflammation, hypersensitivity, and autoimmunity. Letter grading.

262. Clinical and Molecular Cytogenetics. Lecture, three hours. Preparation: students to become familiar with extensive knowledge and expertise in conventional and cutting-edge cytogenetic techniques and their clinical and research applications in humans. Since correct determination of human diploid chromosomal number as 46 in 1956, remarkable amount of work in human genetics has been established in both clinical and research settings. Clinical molecular cytogenetics is study of relationship of chromosomal abnormalities in humans using basic and advanced techniques such as fluorescence in situ hybridization (FISH) and microarray analysis (CMA). Chromosome aberrations are known to cause many human disorders and conditions, including congenital malformations, developmental delays, repeatable spontaneous miscarriages, and cancer. Coverage of mechanism of chromosomal alterations, advances and drawbacks of each technique, common cytogenetic disorders, and cytogenetics of hematologic neoplasms and solid tumors. 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 developmental hematology and hematologic disorders. The course is designed to provide a thorough understanding of the basic science underlying normal and abnormal processes in the hematopoietic system and to introduce students to the systemic and cell biological mechanisms underlying hematopoietic disorders. Specific topics include the anatomy and physiology of the bone marrow and cell biology and biochemistry of hematopoietic cells. Letter grading.


280. Clinical Aspects and Molecular Biology of Bone Marrow Failure Syndromes. (4) Lecture, two hours. Limited to graduate students. Coverage of broad range of topics on both clinical aspects and molecular pathogenesis of bone marrow failure syndromes. Credit is provided for a broad range of topics in molecular and clinical aspects of aplastic anemia, myelodysplastic syndromes, Diamond Blackfan Anemia, Schwachman Diamond Syndrome, Fanconi Anemia, Dyskeratosis Congenita, Paroxysmal Nocturnal Hemoglobinuria, flow cytometry, and bone marrow failure syndromes.

294. Basic Concepts in Oncology. (4) Lecture, three hours; discussion, one hour. Preparation: basic courses in molecular biology, cell biology, genetics, and biostatistics. Letter grading.

296. Research Topics in Pathology. (1 to 12) Review group meeting, one to two hours. Limited to departmental graduate students. Advanced study and analysis of current topics in pathology. Discussion of current research and literature in research specialty of faculty members. May be repeated for credit. S/U grading.

298A-298D. Current Research in Disease Mechanisms. (2 each) Lecture, 90 minutes. Preparation: one course each in molecular biology, cell biology, and biological chemistry. Preparation: advanced undergraduate or graduate students in pathology. Letter grading.

596. Directed Individual Study or Research. (4 to 12) Tutorial, to be arranged. Advanced individual research with members of the staff or of other departments, the letter for purpose of supplementing programs available in department. S/U grading.


Scope and Objectives

The Department of Pediatrics has faculty members at five teaching hospitals: Mattel Children's Hospital UCLA and Olive View-UCLA, Harbor-UCLA, Cedars-Sinai, and Santa Monica UCLA Medical Centers. For second-year medical students, the fundamentals of pediatric history and physical examination are taught at all sites as part of the pediatric clinical skills course. For third-year medical students, the required six-week clinical clerkship in pediatrics is offered at the following five sites: a combined experience at Mattel/Olive View-UCLA and Santa Monica UCLA UCLA, Harbor-UCLA, Cedars-Sinai, and a combined experience in Riverside and Redlands. For fourth-year medical students, in-depth subspecialty electives offered by the Department of Pediatrics are listed in the School of Medicine and a listing of the courses offered, see http://www.pediatrics.medsch.ucla.edu.

For further details on the Department of Pediatrics and a listing of the courses offered, see http://www.pediatrics.medsch.ucla.edu.

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http://www.pediatrics.medsch.ucla.edu

Chairs
Sherin Devaskar, M.D., (Mattel Executive Endowed Professor of Pediatrics), Executive Chair
Rick E. Harrison, M.D., Vice Chair, Clinical Affairs
Thomas S. Kitznner, 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
Mohammed Malekzadeh, M.D., Chair, Olive View-UCLA
Charles F. Simmons, Jr., M.D., Chair, Cedars-Sinai

Scope and Objectives


PHARMACOLOGY

See Molecular and Medical Pharmacology

PHILOSOPHY

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http://www.philosophy.ucla.edu

Gavin Lawrence, Ph.D., Chair

Professors
Tyler 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)
Pamela Hieronymi, Ph.D.
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.
Seana Shiffrin, D.Phil., J.D.
Sheldon R. Smith, Ph.D.

Professors Emeriti
Marilyn McCord Adams, Ph.D.
Robert Merrihew Adams, Ph.D.
Joseph Almog, D.Phil.
Keith S. Donnellan, Ph.D.
Herbert Morris, Ph.D.
Terence D. Parsons, Ph.D.

Associate Professor
Mark D. Greenberg, Ph.D.

Assistant Professors
Samuel J. Cumming, Ph.D.
Katrina J. Elliott, Ph.D.
Gabriel J. Greenberg, Ph.D.
Alexander J. Jullius, 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 undergraduate courses are divided among the groups into which the 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 undergraduate courses are divided 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 the three of the groups and one course in the remaining group.

Transfer Students

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/admissions_prospect.pdf 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.

Students should take two courses in each of the 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.

Transfer Students

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/admissions_prospect.pdf 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 the 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.

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
Graduate Degrees
The Department of Philosophy offers Master of Arts (M.A.), Candidate in Philosophy (C.Phil.), and Doctor of Philosophy (Ph.D.) degrees in Philosophy. A concurrent degree program (Philosophy Ph.D./Law J.D.) is also offered.

Philosophy
Lower Division Courses
1. Beginnings of Western Philosophy. (5) Lecture, three hours; discussion, one hour. Origins of Greek cosmology and philosophy, beginnings of systematic thought and scientific investigation concerning such questions as origin and nature of the material world, concept of laws of nature, possibility and extent of knowledge. Concentration on pre-Socratic philosophers, particularly Anaximander, Heraclitus, the Pythagoreans, Parmenides, Empedocles, and Greek atomists, during first two thirds of course and on Socrat- es 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, possibility of justice, 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 by study of classical texts dealing with major problems, related thematically and studied in chronological order: properties of rational argument, existence of God, problem of knowledge, nature of causality, relation between mind and body, possibility of justice, and others. P/NP or letter grading.

4. Philosophical Analysis of Contemporary Moral Issues. (5) Lecture, three hours; discussion, one hour. Critical study of principles and arguments advanced in discussion of current moral issues. Possible topics include revolutionary violence, rules of warfare, sexual morality, right of privacy, punishment, nuclear warfare and deterrence, abortion and mercy killing, experimentation with human subjects, rights of women. P/NP or letter grading.

5. Philosophy in Literature. (5) Lecture, three hours; discussion, one hour. Philosophical inquiry into such themes as freedom, responsibility, guilt, love, self-knowledge and self-deception, death, and meaning of life through examination of great literary works in Western tradition. P/NP or letter grading.

6. Introduction to Political Philosophy. (5) Lecture, three hours; discussion, one hour. Study of some classical or contemporary works in political philosophy. Questions that may be discussed include What is justice? Why obey the law? Which form of government is best? How much personal freedom should be allowed in society? P/NP or letter grading.

7. Introduction to Philosophy of Mind. (5) Lecture, three hours; discussion, one hour. Study of some classical or contemporary works in philosophical psychology. Questions that may be discussed include What is consciousness? How do we acquire beliefs? Can we know anything with certainty? How can we justify any of our beliefs?

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 scientific entities, inductive confirmation of hypotheses, and occurrence of scientific revolutions. Discussion at nontechnical level of episodes from history of science. P/NP or letter grading.

9. Principles of Critical Reasoning. (4) Lecture, three hours; discussion, one hour. How to analyze 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 infer-


Philosophy

Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website, http://grad.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.
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M101B. Plato — Later Dialogues. (4) (Same as Classics M148B.) Lecture; three hours; discussion, one hour. Requisite: course M101A. Study of selected topics in middle and later dialogues of Plato. P/NP or letter grading.

M102. Aristotle. (4) (Same as Classics M147.) Lecture; three hours; discussion, one hour. Preparation: one philosophy course. Selection of 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 Plato, Aristotle, and Hellenistic philosophers, with emphasis on historical and cultural setting of texts, their literary form, interrelations, and contribution to discussion of basic philosophical issues. P/NP or letter grading.

M103B. Later Ancient Greek Philosophy. (4) (Same as Classics M145B.) Lecture; three hours. Preparation: one course from 1, 100A, M101B, M102, or M103A. Study of some major texts in Greek philosophy of Hellenistic and Roman periods. Readings vary and include works by Stoics, skeptics, philosophers of science, Neoplatonists, etc. P/NP or letter grading.

104. Topics in Islamic Philosophy. (4) Lecture; three hours; discussion, one hour. Preparation: one philosophy course. Development of Muslim philosophy in its great age (from 700 to 1300), with emphasis on historical and cultural setting of texts, their literary form, interrelations, and contribution to discussion of basic philosophical issues. P/NP or letter grading.


106. Later Medieval Philosophy. (4) Preparation: one philosophy course. Metaphysics, theory of knowledge, and theology of Aquinas, 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 of medieval philosophy, e.g., theory of knowing or question of major works of Kierkegaard, with emphasis on interpretation of the texts.

119. Topics in Modern Philosophy. (4) Lecture; three hours; discussion, one hour. Preparation: one philosophy course. Selected topics in one or more philosophies of early modern period, or study in single area such as theory of knowledge or metaphysics in several philosophies. May be repeated for credit with consent of instructor. Concurrently scheduled with course C219. P/NP or letter grading.

Group II: Logic, Semantics, and Philosophy of Science

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. Requisite: course 124. 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, concept formation, theory construction, explanation and prediction, nature of social laws).

127A. Philosophy of Language. (4) (Formerly numbered 127A.) Lecture; four hours; discussion, one hour. Enforced requisite: course 31. Syntax, semantics, pragmatics. Semantical concept of truth, sense and denotation, synonymy and analogy, modalities and tenses, indirect discourse, indexical terms, semantical paradoxes. May be repeated for credit with consent of instructor. Concurrently scheduled with course C228A. P/NP or letter grading.

127B. Philosophy of Language. (4) (Formerly numbered 127B.) Lecture; four hours; discussion, one hour. Requisite: course 136. Topics in current linguistic philosophy. May be repeated for credit with consent of instructor. Concurrently scheduled with course C228B. P/NP or letter grading.

127C. Philosophy of Language. (4) (Formerly numbered 127C.) Lecture; four hours; discussion, one hour. Requisite: course 127A or 127B. Selected topics similar to those considered in course C127B, but with more advanced and technical level. May be repeated for credit with consent of instructor. Concurrently scheduled with course C228C. P/NP or letter grading.

128A. Philosophy of Mathematics. (4) Lecture; four hours. Requisites: courses 31, 137, and preferably one additional logic course. Philosophy of mathematicians, logism 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. Selected topics from psychology of perception, learning, memory, thinking, inference, problem solving. May be repeated for credit with consent of instructor.

130. Philosophy of Space and Time. (4) Lecture; three hours; discussion, one hour. Preparation: one or more courses in philosophy. May be repeated for credit with consent of instructor.

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 bear. Topics may include nature of causation, reality 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 topics on two current topics in philosophy of biology, which may include structure of evolutionary theory, fitness, taxonomy, reductionism, concept of biological species, and biological explanation. P/NP or letter grading.

133. Topics in Logic and Semantics. (4) Lecture; four hours; discussion, one hour. Requisite: course 31. Preparation: two philosophy courses or one philosophy course and one physics course. Selected philosophical problems concerning nature of space and time. Philosophical implications of theories of space-time theories, such as those of Einstein. P/NP or letter grading.

134. Introduction to Set Theory. (4) (Same as Mathematics M114S.) Lecture, three hours; discussion, one hour. Requisite: course 135 or Mathematics 110A or 131A. Axiomatic set theory as framework for mathematical concepts; relations and functions, numbers, cardinality, axiom of choice, transfinite numbers. P/NP or letter grading.

135. Introduction to Metalogic. (4) Lecture; four hours; discussion, one hour. Requisite: course 31. Preparation: one additional course in metalogic or logic. Introduction to formal language, formal deductive systems, and models. Compactness and completeness theorems that concern complexity of notion of logical consequence. Letter grading.

136. Modal Logic. (4) Lecture; four hours. Requisite: course 31. First course in two-term sequence (also see course 176). Topics include various normal modal systems, possible worlds semantics and generalizations, Lemmon/Scott completeness, incompleteness in tense and modal logic, quantification extensions. Letter grading.

C127A. Philosophy of Language. (4) Formerly numbered 127A. Lecture; four hours; discussion, one hour. Requisite: course C127A or C127B. Selected topics similar to those covered in course C127B, but with focus on contemporary issues. May be repeated for credit with consent of instructor. Concurrently scheduled with course C228A. P/NP or letter grading.

C127B. Philosophy of Language. (4) Formerly numbered 127B. Lecture; four hours; discussion, one hour. Requisite: course C127A. Limited to 30 students when concurrently scheduled. P/NP or letter grading.

C127C. Philosophy of Language. (4) Formerly numbered 127C. Lecture; four hours; discussion, one hour. Requisite: course C127A or C127B. Selected topics similar to those considered in course C127B, but with focus on contemporary issues. May be repeated for credit with consent of instructor. Concurrently scheduled with course C228C. P/NP or letter grading.
150. Society and Morals. (4) Lecture, three hours; discussion, one hour. Requisite: course 22. Critical study of principles and arguments advanced in discussions of moral and social issues. Topics similar to those in course 4, but familiarly with some basic philosophical concepts and methods presupposed. May be repeated for credit with consent of instructor.

151A-C151B-151C. History of Ethics. (4-4-4) Lecture, three hours; discussion, one hour. Preparation: two philosophy courses. Each course may be taken independently for credit. P/NP or letter grading. 151A.Selected Classics in Ancient Ethical Theories: Plato, Aristotle; 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; 151C. Selected Classics of Medieval Ethics.

153A. Topics in Ethical Theory: Normative Ethics. (4) Lecture, three hours; discussion, one hour. Requisite: course 22. Study of selected topics in normative ethical theory. Topics may include human rights, virtues and vices, principles of culpability and praise-worthiness (criteria of right action). May be repeated for credit with consent of instructor. P/NP or letter grading.

153B. Topics in Ethical Theory: Metaethics. (4) Lecture, three hours; discussion, one hour. Requisite: course 22. Study and analysis of basic concepts, selected problems, and contemporary issues in metaethics. Topics may include analysis of moral language, justification of moral beliefs, moral realism, skepticism, free will, moral motivation, etc. May be repeated for credit with consent of instructor. May be concurrently scheduled with course C253B. P/NP or letter grading.

154. Topics in Value Theory: Rationality and Action. (4) Lecture, three hours; discussion, one hour. Preparation: two philosophy courses. Examination of selected problems, and contemporary issues in metaethics. Topics may include analysis of moral language, justification of moral beliefs, moral realism, skepticism, free will, moral motivation, etc. May be repeated for credit with consent of instructor. 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 selected problems, and contemporary issues in metaethics. Topics may include analysis of moral language, justification of moral beliefs, moral realism, skepticism, free will, moral motivation, etc. May be repeated for credit with consent of instructor. P/NP or letter grading.

155. Medical Ethics. (4) Lecture, three hours; discussion, one hour. Preparation: one philosophy course. Examination of problems of medical ethics, such as abortion, euthanasia, and medical experimentation. P/NP or letter grading.

156. Topics in Political Philosophy. (4) Lecture, three hours; discussion, one hour. Preparation: one philosophy course. Analysis of some basic concepts in political philosophy. 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, three 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 of Hobbes, Locke, Hume, and Marx. 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: two philosophy courses. Analysis of various problems concerning nature of mind and mental phenomena, such as relation between mind and body, and our knowledge of other minds. May be repeated once for credit with consent of instructor.

162. Philosophy of Language and Communication. (4) Lecture, three hours; discussion, one hour. Requisites: courses 127A, 127B. Theories of meaning and communication; how things refer to things; limits of meaningfulness; analysis of speech acts; relation of everyday language to scientific discoveries. P/NP or letter grading.

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 between mind and body, and our 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 things refer to things; limits of meaningfulness; 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. Intensive investigation of one of two selected topics or works in theory of knowledge, such as a priori knowledge, problem of induction, memory, knowledge as justified true belief. Topics announced each term. May be repeated for credit with consent of instructor. P/NP or letter grading.

175. Topics in Philosophy of Religion. (4) Lecture, three hours; discussion, one hour. Requisite: course 21 or 22. Intensive investigation of one of two topics or works in philosophy of religion, such as attributes of God, arguments for or against existence of God, or relation between religion and ethics. Topics announced each term. May be repeated for credit with consent of instructor.


177A. Existentialism. (4) Lecture, three hours; discussion, one hour. Preparation: one philosophy course. Examination of selected problems, and contemporary issues in metaethics. Topics may include analysis of moral language, justification of moral beliefs, moral realism, skepticism, free will, moral motivation, etc. May be repeated for credit with consent of instructor. P/NP or letter grading.

177B. Historical Studies in Existentialism. (4) Preparation: one philosophy course. Study of central philosophical texts of one of the following: Nietzsche, Heidegger, Jaspers, Buber, Sartre, or Camus. Emphasis on explication and interpretation of the texts. May be repeated for credit with consent of instructor.

178. Phenomenology. (4) Lecture, three hours; discussion, one hour. Preparation: two philosophy courses. Introduction to and method of approach of philosophical problems via works of some of the following: Brentano, Husserl, Heidegger, Schel- ter, Sartre, Merleau-Ponty, Ricoeur. Topics include ontology, epistemology, and particularly philosophy of mind.

179. Asian Philosophy. (4) Lecture, three hours; discussion, one hour. Examination of central concepts and arguments in Buddhist or Chinese philosophy. Appropriate parallels to social concepts in Western tradition. May be repeated for credit with consent of department. P/NP or letter grading.

180. Philosophy of Action. (4) Lecture, four hours. Preparation: two philosophy courses. Study 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. Preparation: course 21. Study of basic metaphysical questions; nature of physical world, of minds, and of universals; and answers provided by alternative systems (e.g. phenomenalism, materialism, dualism). P/NP or letter grading.

183. Theory of Knowledge. (4) Lecture, three hours; discussion, one hour. Requisite: course 21. Analysis of selected topics in philosophical logic. 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 in metaphysics, such as personal identity, nature of dispositions, possibility and necessity, 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 Gender Studies M110C) Lecture, three hours. Preparation: for Gender Studies majors: Gender Studies 10; for other students: one philosophy course. Examination in depth of different theoretical postures on gender and women as they have been applied to study of philosophy. Emphasis on theoretical contributions made by women in philosophy. 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.

191. Variable Topics Research Seminars: Philosophy. (4) Seminar, one hour; discussion, three hours. Preparation: consult Schedule of Classes or “Department Announcements” for topic to be offered in specific term. Reading, discussion, and development of culminating project. May be repeated for credit with consent of instructor. P/NP or letter grading.

198A-198B. Honors Research in Philosophy. (2-2) Tutorial, two hours. Limited to junior/senior philosophy honors program students. Each course to be taken in conjunction with one upper division philosophy lecture course, either concurrently or in subsequent term, under direct supervision of lecture course instructor. Advanced work related to lecture course, further reading, and preparation of 12- to 15-page paper representing original research. Courses 198A and 198B must be taken in conjunction with two different lecture courses, and both must be taken to satisfy departmental honors requirement. May be repeated for credit with consent of instructor. Letter grading.

198C. Honors Research in Philosophy. (4) Tutorial, four hours. Limited to junior/senior philosophy honors program students. Development and completion of honors thesis or comprehensive research project un-
der direct supervision of faculty member. May be re- peated for credit. Individual contract required. Letter grading.

199. Directed Research in Philosophy. (2 to 4) Tu- torial, three hours. Limited to juniors/seniors. Super- vised individual research under guidance of faculty mentor. Culminating paper or research project re- quired. Up to 3 hours may be applied toward degree requirements, but no 199 course may be substituted for course in one of four groups on basis of similarity of subject matter. May be repeated for credit. Individual contract required. P/NP or letter grading.

Graduate Courses

200A-200B-200C. Seminar for First-Year Graduate Students. (4-4-4) Seminar, three hours. Limited to and required of all first-year graduate philosophy stu- dents. Selected topics in metaphysics and epistemol- ogy, history of philosophy, and ethics. S/U or letter grading.

Group I. History of Philosophy


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 such topics as logic or theory of knowl- edge in several medieval philosophers. Topics an- nounced each term. May be repeated for credit with consent of instructor. S/U or letter grading.

207. Seminar: History of Medieval and Renais- sance Philosophy. (4) Seminar, four hours. Selected problems and philosophers. May be repeated for credit with consent of instructor. S/U or letter grading.

208. Hobbes. (4) Lecture, three hours; discussion, one hour. Preparation: one philosophy course. Hobbes' political philosophy, especially Leviathan, with attention to its relevance to contemporary politi- cal philosophy. May be concurrently scheduled with course C108. S/U or letter grading.

209. Descartes. (4) Lecture, four hours; discus- sion, one hour. Preparation: one course of Descartes with dis- cussion 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.

210. Spinoza. (4) Lecture, three hours. Selected topics in philosophy of Spinoza. May be concurrently scheduled with course C110, in which case there is a two-hour biweekly discussion meeting, plus additional readings and longer term paper for graduate stu- dents. S/U or letter grading.

211. Leibniz. (4) Lecture, three hours. Selected top- ics in philosophy of Leibniz. May be concurrently scheduled with course C111, in which case there is a two-hour biweekly discussion meeting, plus additional readings and longer term paper for graduate stu- dents. S/U or letter grading.

212. Locke and Berkeley. (4) Lecture, four hours. Preparation: one philosophy course. Study of philoso- phies of Locke and Berkeley, with emphasis in some cases on one or the other. Limited to 30 students when concurrently scheduled with course C112. S/U or letter grading.

214. 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.

215. Kant. (4) Lecture, three hours; discussion, one hour. Requisite: course 21 or 22. Study of Kant's views on metaphysics, epistemology, ethics, and politics. May be repeated for credit with con- sent of instructor. Concurrently scheduled with course C115. S/U or letter grading.

216. 19th-Century Philosophy. (4) Seminar, four hours. Topics in 19th-century philosophy. May be re- peated for credit with consent of instructor. S/U or let- ter grading.

219. Topics in Modern Philosophy. (4) Lecture, three hours; discussion, one hour. Selected topics in one or more philosophies of early modern period, or study in single area such as theory of knowledge or metaphysics in several philosophies. May be repeat- ed for credit with consent of instructor. Concurrently scheduled with course C119. S/U or letter grading.

220. Seminar: Topics in History of Philosophy. (4) Seminar, three hours. Selected problems and philoso- phers which may be from different periods. May be repeated for credit with consent of instructor. S/U or letter grading.

Group II. Logic, Semantics, and Philosophy of Science

221A. Topics in Set Theory. (4) Lecture, three hours. Requisite: Mathematics M114S. Sets, relations, func- tions, orderings, mappings; well-orderings; Ordi- nal and cardinal arithmetic; finiteness and infinity, continuum hypothesis, inaccessible numbers. For- malization of set theory: Zermelo/Fraenkel; von Neu- mann/Gödel theory. May be repeated for credit with consent of instructor. S/U or letter grading.

221B. History of Set Theory. (4) Lecture, four hours. Development of concept of set and axiomatic set the- ory by examining selected writings of Frege, Cantor, Russell, Zermelo, Gödel, and several others. Origins and significance of certain key ideas, such as set the- ory as logic, axiomatic set theory as reaction to para- doxes, formal first-order logic in set theory as op- posed to informal axiomatics, type theory and rank hi- erarchy, ramification and predicativity, proper classes and sets as small classes, and particular Zermelo/ Fraenkel axiomatic theory. Emphasis on actual ex- pressed ideas and views of various influential authors. S/U or letter grading.


224. Philosophy of Physics. (4) Seminar, three hours. Selected philosophical topics related to physical the- ory, depending on interests and background of partic- ipants, including space and time; observation in quantum mechanics; foundations of statistical me- chanics. May be repeated for credit with consent of instructor. S/U or letter grading.

225. Probability and Inductive Logic. (4) Lecture, three hours. Requisite: course M134 or Mathematics M114S. Topics may include interpretations of proba- bility, Bayesian and non-Bayesian confirmation theo- ry, paradoxes of confirmation, coherence, and condi- tioning. S/U or letter grading.

226. Topics in Mathematical Logic. (4) Lecture, four hours. Content varies from term to term. May be re- peated for credit with consent of instructor. S/U or let- ter grading.

227. Philosophy of Social Science. (4) Lecture, four hours. Examination of philosophical problems con- cerning concepts and theoretical models used in sociocien- ces. Topics may include relation between social pro- cesses and individual psychology, logic of explana- tion in social sciences, determinism and spontaneity in history, interpretation of radical liberty; and from one's own. Students with primary interest and advanced preparation in social sciences encouraged to enroll. May be repeated for credit with consent of instructor. S/U or letter grading.

228A. Philosophy of Language. (4) Lecture, four hours; discussion, one hour. Enforced requisite: course 31. Syntax, semantics, pragmatics. Semanti- cal concept of truth, sense and denotation, synonymy and antonymy, modalities, modal logic, possible worlds semantics. May be repeated for credit with consent of instructor. Concurrently scheduled with course C127A. S/U or letter grading.

228B. Philosophy of Language. (4) Lecture, four hours; discussion, one hour. Requisite: course 31. Course C228A is not requisite to C228B. Selected topics similar to those considered in course C228A, but with focus on contemporary figures. May be re- peated for credit with consent of instructor. Concurrently scheduled with course C127C. S/U or letter grading.

230. Seminar: Logic. (4) Seminar, four hours. May be repeated for credit with consent of instructor. S/U or letter grading.

231. Seminar: Intensional Logic. (4) Seminar, four hours. Topics may include logic of sense and denota- tion, modal logic, logic of demonstratives, epistemic logic, intensional logic of Princípio Mathematica, pos- sible worlds semantics. May be repeated for credit with consent of instructor. S/U or letter grading.

232. Philosophy of Science. (4) Seminar, three hours. Selected topics in philosophy of science. May be repeated for credit with consent of instructor. S/U or letter grading.

233. Seminar: Philosophy of Physics. (4) Seminar, four hours. May be repeated for credit with consent of instructor. S/U or letter grading.

Group III. Ethics and Value Theory

241. Topics in Political Philosophy. (4) Seminar, four hours. Requisites: course 150 or C156 or 157A or 157B. May be repeated for any two philosophy courses. Exclusion of one or more topics in political philosophy (e.g., jus- tice, democracy, human rights, political obligation, alienation). May be repeated for credit with consent of instructor. S/U or letter grading.

245. History of Ethics: Modern. (4) Lecture, four hours; discussion, one hour. Intensive study of Kant's ethical theory. May be repeated for credit with con- sent of instructor. May be concurrently scheduled 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 in- structor. 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. May be concurrently scheduled with course C156. S/U or letter grading.

253B. Topics in Ethical Theory: Metaethics. (4) Lecture, three hours; discussion, one hour. Requisite: course 22. Study and analysis of basic concepts, se- lected problems, and contemporary issues in meta- ethics. Topics may include analysis of moral lan- guage, justification of moral beliefs, moral realism, skepticism, free will, moral motivation, etc. May be re- peated for credit with consent of instructor. May be concurrently scheduled with course C153B. S/U or letter grading.
254. Legal Theory Workshop. (1 to 8) Seminar, three hours. Students engage with work in progress on philosophy of law and in philosophical analysis of leading scholars from around country. Presentation of works in progress by visiting scholars every two weeks. Study by students of papers to be presented to gain background in relevant topics and to be prepared for speakers' presentations. Presentation of student papers to class for discussion. Substantial analytical paper required. S/U or letter grading.

M254A-M254B. Legal Theory Workshop. (1 to 8 each) (Same as Law M255.) 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 grading (M254B).

255. Seminar: Aesthetic Theory. (4) Seminar, four hours. Selected topics. May be repeated for credit with consent of instructor. S/U or letter grading.

M256. Topics in Legal Philosophy. (4) (Same as Law M217.) Lecture, three hours. Examination of topics such as concept of law, nature of justice, problems of punishment, legal reasoning, and obligation to obey the law. May be repeated for credit with consent of instructor.

M257. Philosophy Legal Theory. (1 to 8) (Same as Law M254.) Seminar, three hours. Selected topics in philosophy of law. May be repeated for credit with consent of instructor. S/U or letter grading.

M257A-257B. Philosophy Legal Theory. (1 to 8 each) (Formerly numbered M257.) (Same as Law M252.) 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 grading (257B).

258. Contemporary Philosophy of Law. (4) Seminar, three hours. Limited to graduate students. Recent contributions to theoretical literature on contract law. Possible topics include purpose or function of contract law; relationship of contracts to promises, whether fault should play larger or smaller role in contract law, remedial approaches to breach including larger role for unjust enrichment, and contract law's treatment of fraud and deception. Readings from legal and philosophical literature. S/U or letter grading.

259. Philosophical Research in Ethics and Value Theory. (2 to 4) Seminar, two hours. Preparation: completion of requirement: preparation of ongoing research by graduate students. Participants make presentations, analyze and discuss presentations of others, and read and discuss philosophical texts related to presentations. Must be taken for 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. May be repeated for credit with consent of instructor. S/U or letter grading.

275. Human Action. (4) Preparation: two upper division philosophy courses. Examination of theories, concepts, and problems concerning human actions. Topics may include analysis of intentional actions; determination and freedom of beings of intentional actions. May be repeated for credit with consent of instructor.

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.

285. Philosophy of Psychoanalysis. (4) Seminar, three hours. Examination of topics such as nature and validity of psychoanalytic explanations and interpretations, psychoanalysis and language, metapsychological concepts such as the unconscious, ego, id, super-ego, defense mechanisms, and psychodynamic conception of human nature. S/U or letter grading.

286. Philosophy of Psychology. (4) Seminar, four hours. Relevance of computer simulation to accounts of thinking and meaning; relations between semantical theory and learning theory; psychological aspects of theory of syntax; behaviorism, functionalism, and alternatives; physiology and psychology. S/U or letter grading.

287. Seminar: Philosophy of Language. (4) Seminar, three hours. May be repeated for credit with consent of instructor. S/U or letter grading.

288. Seminar: Wittgenstein. (4) Seminar, three hours. May be repeated for credit with consent of instructor. S/U or letter grading.

289. Seminar: Philosophy of Religion. (4) Seminar, four hours. May be repeated for credit with consent of instructor. S/U or letter grading.

290. Workshop: Philosophy of Language. (4) Seminar, two hours. Ongoing discussion of current issues in philosophy of law based on contemporary texts and current research. Presentations of ideas by attending faculty and graduate students with open discussion. May be repeated for credit with consent of instructor.

291. Workshop: Philosophy of Mathematics. (4) Seminar, three hours. Ongoing discussion of current issues in philosophy of mathematics based on contemporary texts and current research. Presentations of ideas by attending faculty and graduate students with open discussion. May be repeated for credit with consent of instructor. S/U or letter grading.

299. Seminar: Philosophical Research. (4) Seminar, three hours. Preparation: advancement to candidacy. Presentation of ongoing research by graduate students or faculty members. Participants make presentations, analyze and discuss presentations of others, and read and discuss philosophical texts related to presentations. May be repeated for credit with consent of instructor. S/U grading.

Special Studies

375. Teaching Apprentice Practicum. (1 to 4) Seminar, to be arranged. Preparation: apprentice personnel employment as teaching assistant, associate, or fellow. Teaching apprenticeship under active guidance and supervision of regular faculty member responsible for curriculum and instruction at UCLA. May be repeated for credit. S/U grading.

495. Teaching College Philosophy. (2 to 4) Seminar, to be arranged. Seminars, workshops, and apprentice teaching. Selected topics, including evaluation scales, various teaching strategies and their effects, and other topics in college teaching. May be repeated for credit. S/U grading.

501. Cooperative Program. (2 to 8) Preparation: consent of UCLA graduate 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) Tutorial, to be arranged. Properly qualified graduate students who wish to pursue one problem through reading or advanced study may do so if their proposed project is acceptable to one staff member. May be repeated for credit. S/U grading.
Joseph A. Rudnick, Ph.D.
David Saltzberg, Ph.D.
E.T. Tomboulian, Ph.D.
Jean L. Turner, Ph.D.
Vladimir V. Vassalle, Ph.D.
Gary A. Williams, Ph.D.
Edward L. Wright, Ph.D. (David S.axon Presidential Professor of Physics)
Giovanni Zocchi, Ph.D.

Professors Emeriti
Ernest S. Abers, Ph.D.
Eric E. Becklin, Ph.D.
Rubin Brautstein, Ph.D.
Charles D. Buchanan, Ph.D.
Niina Byers, Ph.D.
Marvin Chester, Ph.D.
W. Gilbert Clark, Ph.D.
John M. Connolly, Ph.D.
Robert J. Finkelstein, Ph.D.
Roy P. Haddock, Ph.D.
George J. Igo, Ph.D.
Steven A. Moszkowski, Ph.D.
Bernard M.K. Neffens, Ph.D.
Claudio Pellegrini, Ph.D.
William E. Slater, Ph.D.
Reiner L. Stenzel, Ph.D.
Roger K. Ulrich, Ph.D.
Alfred Y. Wong, Ph.D.
Chun Wa Wong, Ph.D.
Roger W. Ulrich, Ph.D.
Claudio Pellegrini, Ph.D.
Bernard M.K. Nefkens, Ph.D.
Steven A. Moszkowski, Ph.D.
George J. Igo, Ph.D.

Scope and Objectives
Since the time of the ancient Greeks, a natural
tions that existed when the universe's expan-
verse to learn about the exotic physical condi-
tions existed when the universe's expan-

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 syner-
gistically. 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 me-
chanics and nuclear physics — were rapidly
adopted by astronomers to interpret the spec-
troscopic observations of the stars and to con-
struct accurate models of stellar structure.
Einstein's general theory of relativity predicted the expan-
sion of the universe and that most awe-
some compaction of matter — the black hole.

Today astronomers study the accretion of
matter onto supermassive black holes in quasars
and search for the most distant regions of the uni-
verse to learn about the exotic physical condi-
tions existed when the universe's expan-
sion was only fractions of a second old. By
measuring the gravitational interactions on dis-
tance scales from galaxies to the vast super-
clusters of galaxies, astronomers have con-
cluded that most of the universe's matter is
dark or nonluminous; physicists have specu-
lated that this dark matter may consist of yet-
undiscovered exotic particles that are pre-
dicted by the most advanced theories of ele-
mentary 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 of-
fers 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 physi-
cal sciences and should be taken in the first or
second year.

Astronomy 3, 4, and 6 develop the topics cov-
ered in course 3 to somewhat greater depths
but are still aimed at nonscience majors.
Course 4 discusses stellar and supermassive
black holes; course 5 concentrates on the
problem of life in the universe; course 6 dis-
cusses the structure and evolution of the uni-
verse.

Astronomy 81 and 82 are general survey
courses recommended for science majors in
their second year. They systematically intro-
duce astrophysics and require a good back-
ground in physics and mathematics (at least
two terms of the Physics 1 series and two
terms of the Mathematics 31 and 32 series).

Students of junior and senior standing in Phys-
ics 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 physics sciences and who have no mathe-
ematics background beyond the high school
mathematics required for admission to UCLA
may take Physics 1A or 1B.

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 mathe-
ematics 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 examina-
tion with a class at the end of any term. This
serves as a placement examination. A satisfac-
tory 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 de-
partmental 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: Astronomy 81, 82; Physics 1A or
1AH, 1B or 1BH, 1C or 1CH, 4AH, 4BL, 17,
18L; Mathematics 31A, 31B, 32A, 32B, 33A,
33B; Program in Computing 10A or demon-
strated ability to program. Systematic study of
astrophysics should begin with Astronomy 81
and 82, taken in the second year. Recom-
ended: Chemistry and Biochemistry 20A.

Transfer Students
Transfer applicants to the Astrophysics major
with 90 or more units must complete as many
of the following introductory courses as possi-
bile prior to admission to UCLA: two astron-
omy courses, two years of calculus, one and
one half years of calculus-based physics with
laboratory for majors, and one programming
course.

Refer to the UCLA Transfer Admission Guide at
http://www.admissions.ucla.edu/prospect/adm
itr.htm for up-to-date information regarding
transfer selection for admission.

The Major
Required: Astronomy 115, 117, 127, 140, 180;
Physics 105A, 105B, 110A, 110B, 115A, 115B,
115C; 131. Recommended: Physics 108,
M102, 124, 132, 140A, 140B.

Honors Program
Senior majors in Astrophysics with a 3.5
grade-point average in all astronomy, mathe-
ematics, 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 Astron-
omy 199. To receive honors and highest hon-
ors at graduation, the grade-point average
must remain at 3.5 and 3.75 or better, respec-
tively, and work in course 199 must reflect orig-
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 analytic and experimental techniques of both fields to bear on the complicated behavior of microbiological macromolecular systems.

Preparation for the Major

Required: Physics 1A or 1AH, 1B or 1BH, 1C or 1CH, 4AH, 4AL, 17, 87; Chemistry and Biochemistry 20A, 20B, 30A, 30B; Life Sciences 2, 3 or 3H, 4; Mathematics 31A, 31B, 32A, 32B, 33A. 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, and one general chemistry course for majors.

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.

Preparation for 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 study other fields as well. 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, 4AH, 4AL, 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.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.

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.

Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website, http://grad.ucla.edu/gasaa/grad_reqs.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 intending 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. 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 astronomy: planetary nebulae and novae (white dwarfs), supernovae, pulsars, galactic X-ray sources, and gamma ray bursts. Supermassive 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 astrophysics. Describes 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 introduction to cosmology. Detailed study of research currently in media, including meteor impacts, greenhouse effect, NASA, cosmology, and extraterrestrial life. Investigation of forces that influence greenhouse effect, NASA, cosmology, and extraterrestrial life. Selected topics treated in some depth, and biology but includes some chemistry, geology, where in context of evolution of universe from simple to complex universe. P/NP or letter grading.

8. Astrophysics I: Stars and Nebulae. (4) Lecture, three hours; discussion, one hour. Requisites: Mathematics 31A, 31B, and Physics 1A or 1AH. Open to qualified upper division undergraduate students. Survey of our knowledge about stars: their distances, masses, luminosities, temperatures, and interactions between astronomical, star, planet, and gas nebulae. 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. Open to qualified upper division students. Basic principles of stellar structure and evolution. Red giants, white dwarfs, novae, supernovae, neutron stars, and black holes. Pulses and galactic X-ray sources. Milky Way galaxy and interstellar medium. Extragalactic astronomy, galaxy clustering, active galactic nuclei, and quasars. Introduction to the dynamical history of Big Bang, and earliest moments of universe. P/NP or letter grading.

88A-88Z. Lower Division Seminars. (2 each) Seminar, two hours. Limited to freshmen. Variable topics; consult Scheduling Office. Topics to be offered in specific term. P/NP or letter grading.

88A. Cosmic Evolution. (2) Seminar, two hours. Limited to freshmen. Variated astronomical and physical processes of cosmic evolution: discussion of how, over billions of years, the fundamental forces of nature have transformed universe from fiery origin at Big Bang into abode for intelligent life. 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). Particles in distribution, partition functions, black body radiation, Sackur-Tetrode, equilibrium. Applications to stellar atmospheres, 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 photography. Emphasis on use of computers for automatic collection of data and for processing two-dimensional astronomical images. P/NP or letter grading.

190. Research Colloquia in Astrophysics. (2) Seminar, two hours. Designed to bring together students under different research interests 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 regard to understanding modern research in field and/or laboratory equipment. May be repeated for credit. P/NP grading.

196. Research Apprenticeship in Astrophysics. (2 to 4) Tutorial, three hours per week per unit. Limited to juniors/seniors with overall 3.0 grade-point average. Entry-level research apprenticeship for upper division students under guidance of faculty mentor. May be repeated for credit. Individual contract required. P/NP grading.

197. Individual Studies in Astronomy. (2 to 4) Tutorial, four hours. Limited to juniors/seniors. Individual intensive study, with scheduled meetings to be arranged between student and instructor. 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.

198. Honors Research in Astrophysics. (2 to 4) Tutorial, four hours in laboratory, five hours. Limited to outstanding junior honors major, overall average 3.0 grade-point average. Development and completion of honors thesis or comprehensive research project under direct supervision of faculty member. May be repeated for credit. Individual contract required. Letter grading.

199. Directed Research or Senior Project in Astronomy. (2 to 4) Tutorial, two hours. Limited to junior/senior Astrophysics and Physics majors. 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.


277A-277B. Astronomy Research Project. (6-8) Tutorial, to be arranged. Designed for second-year graduate and upper-division students. Two-term research project planned in conjunction with faculty advisor on any suitable research topic in astronomy or astrophysics, culminating in written report at end of second term. S/U (277A) and letter (277B) grading.

278. Special Topics in Astronomy. (2 or 4) Seminar, to be arranged. Informal course with lecture/seminar format, focusing on one of set of specific topics in astronomy. S/U (278A)-unit course or letter (4(s)-unit course grading.

279. Seminar: Current Astronomical Research. (2) Seminar, one hour. Astronomy and astrophysics colloquium with lectures on current research by local and visiting researchers. S/U grading.

281. Quantum Mechanics for Astrophysics. (4) Lecture, four hours. Designed for departmental graduate students. Quantum mechanical topics in areas of interest for astrophysics applications. Hydrogen atom, radiative transitions, energy levels, molecular spectroscopy including electronic, vibrational, and rotational transitions, 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 research. Modern statistical methods. Topics to include Fourier transforms, filtering, and power spec-
Physics

Lower Division Courses

1A. Physics for Scientists and Engineers: Mechanics (Honors). (5) Lecture/demonstration, four hours; discussion, one hour. Recommended preparation: high school physics, one year of high school calculus or Mathematics 31A and 31B. Enforced requisites: Mathematics 31A, 31B. Enforced corequisite: Mathematics 32A. Recommended corequisite: Mathematics 32B. 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 requisites: Mathematics 31A, 31B. Enforced corequisite: Mathematics 32B. Recommended 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: course 1A or 1AH, Mathematics 31B, 32A. Enforced corequisite: Mathematics 33A. 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, discussion, two hours; laboratory, two hours. Enforced requisites: courses 1AH or 1A, 1B or 1BH, Mathematics 32A, 32B. Enforced corequisite: Mathematics 33A. Recommended corequisite: Mathematics 33B. Enriched preparation for upper division physics courses. Same material as course 1C 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: course 1A or 1AH. Enforced corequisite: course 1B or 1BH. Experiments on measuring force, mass, and acceleration. Conservation of energy, impulse and momentum, damped and driven oscillators, resonance and vibrating strings. Computer data analysis 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 or 1BH. Enforced corequisite: course 1C or 1CH. Experiments on electric forces, fields, and potentials. Magnetic fields. Linear and nonlinear devices. Resistors, capacitors, and inductors. Modern circuits. Geometrical and physical optics. Letter grading.

4BH. Physics for Life Sciences Majors: Mechanics. (5) Lecture, three hours; discussion, one hour; laboratory, two hours. Enforced requisites: Mathematics 3A, 3B. Enforced corequisite: Mathematics 3C. Not open for credit to students with credit for course 6AH. Motion, Newton’s laws, energy, linear and angular momentum, rotation, equilibrium, gravity, biological applications. P/NP or letter grading.

4BH. Physics for Life Sciences Majors: Statics and Dynamics (Honors). (5) Lecture, three hours; discussion, one hour; laboratory, two hours. Enforced requisites: Mathematics 3A, 3B. Enforced corequisite: Mathematics 3C. Not open for credit to students with credit for course 6AH. Statics and dynamics of forces, energy, and momentum, with applications to biological and biochemical systems. Physics of states of matter (solids, liquids, and gases) and interfaces as they apply to biological organisms. P/NP or letter grading.

4BH. Physics for Life Sciences Majors: Waves, Electromagnetism. (5) Lecture, three hours; discussion, one hour. Enforced requisites: course 6A or 6AH. Not open for credit to students with credit for course 6BH. Electromagnetic waves, sound, electricity and magnetism, electromagnetic waves, biological applications. P/NP or letter grading.

4BH. Physics for Life Sciences Majors: Sound, Light, and Hydrodynamics (Honors). (5) Lecture, three hours; discussion, one hour; laboratory, two hours. Enforced requisites: course 6A or 6AH. Not open for credit to students with credit for course 6BH. Sound and electromagnetic waves, interference, diffraction, radioactivity, and hydrodynamics, with applications to biological and biochemical systems. P/NP or letter grading.

4C. Physics for Life Sciences Majors: Light, Fluids, Thermodynamics, Modern Physics. (5) Lecture, three hours; discussion, one hour; laboratory, two hours. Enforced requisites: course 6B. Not open for credit to students with credit for course 6C. Geometrical and physical optics, fluid statics and dynamics, thermodynamics. Selected topics from foundations of quantum mechanics, nuclear and particle physics; relativity; medical detectors; biological applications. P/NP or letter grading.

4CH. Physics for Life Sciences Majors: Electricity, Magnetism, and Transport (Honors). (5) Lecture, three hours; discussion, one hour; laboratory, two hours. Enforced requisites: course 6BH. Not open for credit to students with credit for course 6C. Electric statics in vacuum and in water. Electric current with applications to electronic devices. Magnetism, especially NMR. Diffusion and heat flow, with applications to biological 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 in freshman standing not required. Topics include planetary motion, Newton’s laws, gravitation, electricity and magnetism, wave motion, light, sound, and heat, relativity, quantum mechanics, atoms, and subatomic particles. As time permits, development of physical ideas placed in cultural and historical perspective. P/NP or letter grading.

11. Revolutions in Physics. (4) Lecture, three hours; discussion, one hour. Survey of modern physics in terms of general UCLA credit. Review of classical physics from late 19th century and its growing set of dilemmas. Revolutions of relativity and quantum mechanics that have led to much deeper understanding of structure of space and time. Specific topics include special and general relativity, cosmology (Big Bang), quantization of light, nucleus and radioactivity, origin of elements, and quantum mechanics. P/NP or letter grading.


18L. Modern Physics Laboratory. (4) Lecture, one hour; laboratory, six hours. Enforced requisites: courses 1A, 1B, and 1C (or 1AH, 1BH, and 1CH), 4AL, 4BL, 17. Experiments on radioactivity, scattering, Planck constant, superconductivity, superfuidity. Letter grading.

87. Introduction to Biophysics. (4) Formerly numbered M88) Seminar, three hours. Enforced requisites: courses 1A, 1B, and 1C, or 1AH, 1BH, and 1CH, or 6A, 6B, and 6C. Chemistry 20A, 20B. Life Sciences 1A, 1B, Mathematics 3A, 3B, 31A, 31B, and 32A. Specific examples of diverse biological design such as scaling of metabolic activity, bone and mus-
ple mass, cell size, cell membranes and pumps, heart and blood circulation, swim bladders, insect vision, electrophoresis . . ., studied quantitatively using elementary mathematics and physical principles. P/NP or letter grading.

88. Lower Division Seminar: Current Topics in Physics. (2) Limited to freshmen/sophomores. Intensive exploration of one of a collection of courses 1A, 1B, and 1C on current research. Consult Schedule of Classes for topics to be offered in a specific term. P/NP or letter grading.

96A. Workshop: Numerical Computational Physics. (1) Laboratory, one hour. Introductory presentations on three most common mathematical software packages — Mathematica, Mathcad, and MATLAB. After some familiarization with most common software functions, development of student personal preferences and assessment of advantages and strong points of each by solving problems in computational physics. P/NP grading.

98X. PEERS Collaborative Learning Workshops for Life Sciences Majors. (1) Laboratory, three hours. Corequisite: associated undergraduate lecture course in physics for life sciences majors. Development of problem-solving skills and intuition in collaborative learning environment. May be repeated three times, but only 1 unit may be applied toward graduation. P/NP grading.

Upper Division Courses

105A. Analytic Mechanics. (4) Lecture, three hours; discussion, one hour. Requisites: courses 1A, 1B, and 1C (or 1AH, 1BH, and 1CH), Mathematics 32B, 33A. Corequisite: Mathematics 33B. Newtonian mechanics and conservation laws, gravitational potentials, calculus of variations, Lagrangian and Hamiltonian mechanics, central force motion, linear and nonlinear oscillations. P/NP or letter grading.


116. Electronics. (4) Lecture, three hours; laboratory, three hours. Alternating current circuits, transmission line circuits, transistor and IC circuits to generate, modify, and detect electrical signals, introduction to digital circuits, analysis of noise and methods to reduce its influence in electrical measurements. P/NP or letter grading.

117. Electronics for Physical Measurements. (4) Lecture, three hours; laboratory, two hours. Requisites: courses 1A, 1B, and 1C (or 1AH, 1BH, and 1CH), Mathematics 32B, 33A, 33B. Hands-on experimental course to develop understanding of design principles in modern electronics for physics measurements. Introduction to analog and digital electronics from practical viewpoint, followed by examination of typical circuit instrumentation and study of methods of computer data acquisition and signal processing. P/NP or letter grading.

118. Electronics for Physical Measurements. (4) Lecture, three hours; laboratory, four hours. Requisites: courses 1A, 1B, and 1C (or 1AH, 1BH, and 1CH), 110A, Mathematics 32B, 33A, 33B. Provides students with opportunity to apply basic knowledge of circuit design for purpose of building stand-alone circuits with function related to control or measurement. Examples of physics-oriented projects include radio-frequency detection and measurement of mechanical resonances of bar, FM transmitter, speed of sound using radio-frequency pulsed ultrasound, sun-following pointers, cosmic ray detector. P/NP or letter grading.

M122. Introduction to Plasma Electronics. (4) Same as Electrical Engineering M138.) Lecture, three hours; discussion, one hour; outside study, eight hours. Requisite: electrical engineering 101A. Senior-level introductory course on electro-dynamics of ionized gases and applications to material processing, generation of coherent radiation and particle beams, and high-intensity 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), 110A, Mathematics 32B, 33A, 33B. Corequisite: course 115A. 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 interactions. P/NP or letter grading.

126. Elementary Particle 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. Introduction to the schemes of elementary particles. Basic standard model interactions: strong, electromagnetic, weak, and gravitational. Properties of baryons, mesons, quarks, and leptons; conservation laws, symmetries and broken symmetries of 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 115A, 115B, 115C. Introduction to cosmology and high-energy particle astrophysics, based on latest developments of both experiment and theory. Special emphasis on unified picture of universe that emerges from particle physics, astronomy, and cosmology. Extensive discussion of unsolved problems and future prospects to help students determine their opportunities in future career. P/NP or letter grading.

131. Mathematical Methods of Physics. (4) Lecture, three hours; discussion, one hour. Requisites: courses 1A, 1B, and 1C (or 1AH, 1BH, and 1CH), 131, 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 requisite: course 112. Introduction to basic theoretical concepts of solid-state physics with applications. Crystal symmetry; cohesion of materials; solid-state devices; electron, neutron, and electromagnetic waves in a lattice; reciprocal lattice; phonons and their interactions; free electron theory of metals; energy bands. Letter grading.


144. Polymer Physics. (4) Lecture, three hours; discussion, one hour. Enforced requisite: courses 105A, 110A, and 112 or Chemistry 110A. How high physical properties of polymers can be derived from mathematical models of chains. Computer generation of these models to calculations based on random walk problem and used to predict mechanical characteristics of large molecules. Study of networks of polymers and polymeric fluids, with focus on rheological and elastic properties. Discussion of movement of individual polymers within melts. Study of examples of more complex structures, such as polymer fractals. Correlation of applications of these concepts with focus on their potential role in evolution and current hypotheses on origins of life. P/NP or letter grading.
150. Physics of Charged-Particle and Laser Beams. (4) Lecture, three hours; discussion, one hour. Requisites: courses 1A, 1B, and 1C, or 1A, 1B, 1CH, 105A, and 110B. Physics of charged-particle and laser beams presented as a unified subject. Basic physics of charged-particle beams, including relativistic particle motion in electromagnetic fields, synchrotrons and bending magnets, focusing, acceleration mechanisms, linear and circular accelerators, and advanced topics. Some fundamentals of laser physics, including laser beams, beam shaping, and amplification mechanisms, linear light optics, laser resonators, and advanced topics and applications. P/NP or letter grading.

M155. 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 transport 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. 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, or 1CH, 105A, 105B, 110A, 110B. Introduction to field of computer modeling of physical systems using particle models; numerical models and methods, methods of diagnosis and problem-solving, 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.

M180G. Soft Matter Laboratory. (4) (Same as Chemistry M120) Laboratory, four hours. P/NP or letter grading.

180Q. Quantum Optics Laboratory. (4) Lecture, two hours; laboratory, six hours. Requisite or corequisite: course 115C. Limited to junior/seniorAstrophysics and Physics majors. Use of techniques of quantum optics to demonstrate concepts of quantum mechanics, including superposition, quantum measurement, hidden variable theories, and Bell’s inequality. Examination and use of modern optics, including lasers, optics, fibers, polarization manipulation, and photon counting. Letter grading.


C186. Neuropysiology: Brain-Mind Problem. (4) (Formerly numbered 186) Lecture, three hours; discussion, one hour. Requisites: courses 1A, 1B, 1C, 4AL, 4BL, 4CL, 1A2, 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. Introduction to commonly used experimental and theoretical techniques of measuring, quantifying, and modeling neural activity, and their relative strengths and weakness and use of them to understand link between nervous system and behavior. Behavior in example model systems. Discussion of mechanisms of interaction between neural circuits and their role in cognition, learning, and sleep. Computer laboratory component where students learn to write simple codes to quantify neural activity patterns. Concurrently scheduled with course CM286. 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.

188A. Physics of Energy. (4) Lecture, three hours; discussion, one hour. Requisites: courses 1A, 1B, 1C, 17, Mathematics 31A, 31B, 32A, 32B, 33A. Description of underlying physics of energy. Energy systems are based on well-known undergraduate-level physics principles such as mechanics, electromagnetism, and thermodynamics. Some understanding of fluid mechanics, quantum physics, statistical mechanics, and nuclear physics also helpful, but those concepts introduced as needed. Understanding energy is of primary importance to your world today, as we face serious challenges to find new and renewable energy sources to meet world demand, and as energy production is often accompanied by undesirable environmental and social side-effects. P/NP or letter grading.

188B. 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 undertakings supervised tutorial research in seminar setting with one or more faculty members to discuss their own work or related work in discipline. Led by one supervising faculty member. May be repeated for credit. P/NP or letter grading.

191. Variable Topics Research Seminars: Physics and Astronomy. (4) Seminar, three hours. Participating research seminar on advanced topics in physics. Reading, discussion of culminating group project. Content varies from year to year. May be repeated for credit by petition. P/NP or letter grading.

192. Undergraduate Practicum in Physics. (2 to 4) Seminar, three hours. Limited to juniors/seniors. Training in supervised practicum for advanced undergraduate students. 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. P/NP or letter grading.

193. Journal Club Seminars: Physics. (2) 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 participation 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 grading.

194. Research Group Seminars: Physics and Astronomy. (1) Research group meeting, one hour. Designed for undergraduate students who are part of research group, discussion of research of faculty members or students with regard to understanding methodology in field and laboratory equipment. May be repeated for credit. P/NP grading.

195. Research Apprenticeship in Physics. (2 to 4) Tutorial, three hours per week per unit. Limited to juniors/seniors with overall 3.0 grade-point average. Entry-level research apprenticeship for upper division students under guidance of faculty mentor. May be repeated for credit. Individual contract required. P/NP or letter grading.

197. Individual Studies in Physics. (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. Supervised 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 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 under direct supervision of faculty member. May be repeated for credit. Individual contract required. Letter grading.

199. Directed Research or Senior Project in Physics. (2 to 4) Tutorial, two hours. Limited to juniors/senior. 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

201C. Modern Physics Research Areas. (2) Review of modern physics research areas, with emphasis on one actively pursued at UCLA. P/NP grading.


213B. Advanced Atomic Structure. (4) N-s symbols, continuous groups, fractional parentage coefficients, n electron systems.


215C. Quantum Statistical Mechanics and the Many Body Problem. (4) Lecture, three hours. Classical methods for interacting systems; quantum field theory techniques in statistical mechanics; Green’s


221A-221B-221C. Quantum Mechanics. (4-4-4) Lecture, three hours. S/U or letter grading. 221A. Fundamentals of quantum mechanics, operators and state vectors, equations of motion. 221B. Requisite: course 221A. Rotations and other symmetry operations, perturbation theory. 221C. Formal theory of collision processes, quantum theory of radiation, introduction to relativistic quantum mechanics.


223. Advanced Classical Mechanics. (4) Requisite: course 220. Topics such as nonlinear mechanics, ergodic theory, mechanics of continuous media.

224. Introduction to the Strong Interaction. (4) Evidence concerning the strong interaction, particularly as exemplified in nucleon/nucleon and pion/nucleon systems. Isospin, scattering amplitudes, polarization, properties of pions, one pion exchange potential, phase shift analysis.


230D. Quantum Field Theory. (4) Lecture, four hours. Requisites: courses 221A, 221B, 221C. Topics in modern quantum field theory, including solitons, instantons, and other topological defects, large N methods, and wave function spectrum; lattice field theory, effective field theory methods and chiral Lagrangians, conformal field theory, and topological aspects of anomalies. S/U or letter grading.

231A. Methods of Mathematical Physics. (4) Lecture, three hours. Not open for credit to students with credit for Mathematics 266A. Linear operators, review of functions of a complex variable, integral transforms, partial differential equations. S/U or letter grading.


231C. Methods of Mathematical Physics. (4) Lecture, three hours. Not open for credit to students with credit for Mathematics 266C. Perturbation theory; Singular integral equations, renormalization theory and renormalization group. S/U or letter grading.

232A-232B. Relativity. (4-4) Special and general theories of relativity, with applications to elementary particles and astrophysics.

232C. Special Topics in General Relativity. (4) Lecture, four hours. S/U or letter grading.


234. Particle Astrophysics. (4) Requisite: course 221A. Group representation theory and applications to quantum mechanics of atoms, molecules, and solids.

235. Geometry and Physics. (4) Same as Mathematics M217.) Lecture, three hours. Interdisciplinary course on topics at interface between physics and mathematics of differential and algebraic geometry. Topics include symplectic geometry, Seiberg/Witten theory, conformal field theory, Calabi/Yau manifolds, mirror symmetry and duality, integrable systems. S/U grading.

237A. String Theory. (4) Lecture, four hours. Requisites: courses 221A, 221B, 221C, 230A. Historical introduction to string theory, including classical bosonic string and its symmetries; Introduction to superstring theory, supercovariant quantization, conformal field theory, Polyakov path integral, tree level amplitudes, and loop amplitudes. S/U grading.

237B. String Theory. (4) Lecture, four hours. Requisite: course 237A. Topics may include toroidal compactification, t-duality and d-branes, supersymmetric strings, orbitifolds, Calabi/Yau compactifications and physics in four dimensions, and strings at strong coupling and dualities. S/U or letter 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 or 4) 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: Soft Matter/Biological Physics. (2) Tutorial, one hour. Required of each graduate student doing research in this field. One-hour presentation by students either on their ongoing research or on agreed on topic. Students answer critical questions and participate in critical examination of research. 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 original and selected literature in research specialty of faculty member teaching course. May be repeated for credit. S/U grading.

297. 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 by staff and students, in both experiment and theory. May be repeated for credit. S/U grading.

307A. Integrated Science Instruction Methods. (4) (Same as Chemistry M307A and Earth and Space Sciences M307A) Lecture, two hours; discussion, one hour; laboratory, one hour. Preparation: one introductory 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, historical, science education, S/U or letter grading.

307B. Integrated Science Instruction Methods. (4) (Same as Chemistry M307B and Earth and Space Sciences M307B) Lecture, two hours; discussion, one hour; laboratory, one hour. Requisite: course M307A or Chemistry M307A or Earth and Space Sciences M307A. 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). Requisite: of all new teaching assistants. Course involves teaching. 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 twice 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 or letter grading.

598. Master's Thesis 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
Thomas J. O’Dell, Ph.D., Interim Chair
Baljit S. Khakh, 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, 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.mcip.ucla.edu or UCLA ACCESS to Programs in Molecular, Cellular, and Integrative Life Sciences at http://www.uclaccess.ucla.edu.

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 M230 and Physiological Science M210.) Lecture, four hours; discussion, one hour. Requisite: Neuroscience M202. Introduction to mechanisms of synaptic processing. Selected problems of current interest, including regulation and modulation of transmitter release, molecular biology and physiology of receptors, cellular basis of integration in sensory perception and learning, neural nets and oscillators, and molecular events in development and sexual differentiation. Letter grading.

220. Methods in Cell Physiology. (6) Linear circuit analysis, including admittance, transfer function, and filters using transform methods. Application of these concepts to electronic analog circuits in laboratories and workshops, with emphasis on operational amplifiers. Applications to electrophysiology include microelectrode amplifiers, voltage clamp and patch clamp techniques, with circuit analysis and noise considerations. Digital electronics cover logic gates, sequential circuits, and A/D and D/A conversion, with introduction to sampling theory.

221. Cell Physiology: Excitability. (6) Requisites: course 220. In-depth coverage of general properties of excitable cells, linear cable properties, nonlinear conductance changes, and generation and propagation of the nerve impulse. Voltage gating and gating currents, as well as relationship between macroscopic conductance and single channel properties discussed in analytical and computational publications.

298. Current Topics in Physiology. (2 to 4) Lecture, one hour; discussion, one hour. Designed for graduate students. Students read primary literature in a
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specified area and conduct or participate in discussions on these papers. May be repeated for credit. S/U or letter grading.

596. Directed Individual Study or Research. (2 to 12) Tutorial, to be arranged. S/U grading.

597. Preparation for M.S. Comprehensive Examination 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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Jeffrey B. Lewis, Ph.D., Chair

**Professors**

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Kathleen Bawn, Ph.D.
Michael S.Y. Chwe, Ph.D.
James D. DeNardo, Ph.D.
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.
Jeffrey B. Lewis, Ph.D.
Michael P. Lofchie, Ph.D.
Susanne Lohmann, Ph.D.
Barry O’Neill, Ph.D.
Karen J. Orren, Ph.D.
Anthony P. Pagden, Ph.D.
Mark A. Peterson, Ph.D.
Daniel N. Posner, Ph.D. (James S. Coleman Professor of International Studies)
Ronald L. Rogowski, Ph.D.
Michael L. Ross, Ph.D.
Andrew Sabl, Ph.D.
Mark Q. Sawyer, 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**

Leonard Binder, Ph.D.
Mattei Dogan, Docteur es Lettres
Leonard Freedman, Ph.D.
Robert S. Gerstein, Ph.D.
Edward González, Ph.D.
Roman Kolokowicz, Ph.D.
Charles R. Nixon, Ph.D.
Carole Pateman, D.Phil.
David C. Rapoport, Ph.D.
Richard N. Rosecrance, Ph.D.
Barbara L. Sinclair, Ph.D. (Marvin Hoffenberg Professor Emerita of American Politics and Public Policy)
Richard L. Sklar, Ph.D.
David A. Wilson, Ph.D.

Charles E. Young, Ph.D.

**Associate Professors**

Richard D. Anderson, Jr., Ph.D.
Scott C. James, Ph.D.
Kirstie M. McClure, Ph.D.
Raymond A. Rocco, Ph.D.
Michael F. Thies, Ph.D.
Robert Trager, Ph.D.
Lynn Vavreck Lewis, Ph.D.
Brian D. Walker, Ph.D.

**Assistant Professors**

Michael J. Callen, Ph.D.
Lorrie A. Frasure-Yokley, Ph.D.
Leslie N. Johns, Ph.D.
Christopher N. Tausanovitch, Ph.D.

**Adjunct Assistant Professor**

James A. Desveaux, 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 focused to serve the needs of the liberal arts major, the student seeking preparation for graduate work in political science, public administration, law, and other professional fields, and the student preparing for specialized roles in political and public organizations.

The graduate program leads to the Ph.D. degree in Political Science (a master’s degree may be earned in the process of completing Ph.D. requirements). It is designed to give students a strong foundation in the discipline while enabling them to acquire additional skills for advancing their professional careers.

**Undergraduate Study**

**Political Science B.A.**

**Political Science Premajor**

All students intending to major in Political Science must enroll as Political Science premajors. After completion of preparation for the major courses, they need to petition to enter the major in the Undergraduate Office, 4269 Bunche Hall.

**Preparation for the Major**

*Required:* Four lower division courses from Political Science 10, 20, 30, 40, 50. Students must also take Political Science 6 or 6R. Statistics 10 or 12 may be substituted for course 6 or 6R.

Students must complete all premajor courses with a 2.0 grade-point average by the time they attain 135 units. Admission to the major is granted only after successful completion of all lower division requirements.

**Transfer Students**

Transfer applicants to the Political Science major with 90 or more units must complete the following introductory courses prior to admission to UCLA: one statistics course and four courses from political theory, world politics, game theory, American politics, or comparative politics.

Refer to the UCLA Transfer Admission Guide 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 organized into six fields: (I) political theory, (II) international relations, (III) American politics, (IV) comparative politics, (V) methods and models, and (VI) race and ethnic politics.

In fulfilling the requirement of 10 upper division political science courses, students must satisfy the following:

1. A concentration in one field consisting of at least three upper division courses in that field
2. A distribution requirement of at least one upper division course in each of three different fields outside the field of concentration; multifield courses from the concentration field may not satisfy a distribution field
3. Four additional political science courses to comprise the total of 10

Courses 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, 195CE, 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.

**Honors Program**

The department honors program is open to seniors and to students who (1) have completed five upper division political science courses (two of which are in one field), (2) have a 3.5 grade-point average in upper division political science courses, and (3) are eligible for College of Letters and Science honors. Students should have substantial experience in writing research papers before they enter the honors program or course 191H.

Students wishing to qualify for graduation with departmental honors must complete courses 191H and 198, in which a senior thesis is written. Successful completion of the honors program is indicated on the transcript and diploma.
Political Science Minor

The Undergraduate Council of the UCLA Academic Senate voted to suspend admissions to the Political Science minor effective Winter Quarter 2012. Students currently in the minor are not affected by the admissions suspension.

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, 4269 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.

A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor.

Each minor course must be taken for a letter grade, and students must have an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website, http://grad.ucla.edu/gasaa.

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. At least three of the five 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). Required: course 6. Open only to students who are preparing for the B.A. in Political Science. P/NP or letter grading.

10. Introduction to Political Theory. (5) Lecture, three hours; discussion, one hour. Exposition and analysis of seminal works and core 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 prerequisite: course 20. Open only 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.

104A-104B. Introduction to Survey Research. (4-4) Lecture, three or four hours; discussion, one hour (when scheduled). Required: course 6. Designed for juniors/seniors. Courses in fundamentals of survey research as a research method. P/NP or letter grading.

104C. Dissertation. (1-4) Seminar, three or four hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Study of applied ethics and governance. P/NP or letter grading.

M107. Women and Politics. (4) Same as Gender 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 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 science; women and human rights; ERA; struggle for suffrage; mothers as political actors; women and revolution, 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. Ancient and Early Medieval Political Thought from Plato to Machiavelli. (Same as Classics M121.) 111B. Early Modern Political Thought from Hobbes to Bentham. 111C. 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 Democracy. (5) Same as Classics M125.) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Democracy 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 proud of its power, “kratos.” It became only regime capable of including all members of community 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 century. P/NP or letter grading.

113B. Politics, Theory, and Film. (4) Seminar, four hours. Recommended requisite: course 10. Designed for juniors/seniors. Intensive and individualized examination of politically significant films with respect to 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 19th century. P/NP or letter grading.

114A. Exposition and critical analysis of American political thinkers from the Puritan period to 1865. 114B. Exposition and critical analysis of American political thinkers from 1865 to the present.

M115A. Ethics and Governance. (4) Same as Public Policy M122.) Lecture, three or four hours; discussion, one hour (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 people reason about whether action X is morally right or wrong? How do principles influence how people reason about whether action X is morally right or wrong? How do people reason in a setting that encourages people to act ethically, contribute to public goods, and lead productive and fulfilled lives? May be applied toward Field I or III. P/NP or letter grading.

M115B. Political Ethics. (4) Same as Public Policy M126.) Lecture, three or four hours; discussion, one hour (when scheduled). Course M115A is not requi-
site to M115B. Designed for juniors/seniors. Study of major issues in morality, or lack thereof, of political life. Covers moral arguments and theories, and real-world examples such as Watergate, terrorism, civil rights politics, and presidential campaigns. Topics include classical ethical theory, role-relati- sive ethics, Machiavellian amorality, democratic re- sponsibility, ethos of compromise, dirty hands problems, international ethics. Letter grading.

M115C. Citizenship and Public Service. (4) (Same as Civ. 115.) Lecture, three or four hours; discussion, one hour (when scheduled). Recommended requisite: course 10. Designed for juniors/seniors. Study of ways in which political thinkers have conceived the relationship between public service and private life. How these ideas have changed over time, and frameworks for thinking about citizenship in era of markets and globalization. P/NP or letter grading.

115D. Diversity, Disagreement, and Democracy: Can’t We All Just Get Along? (4) (Formerly numbered M115D.) 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.

115E. Marxism. (4) Lecture, three or four hours; dis- cussion, one hour (when scheduled). Designed for juniors/seniors. Analysis of the 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 the formal systems of law and legal reasoning. Use of game theoretic reasoning and historical analysis. Prior exposure to both useful but not re- quired. P/NP or letter grading.

119. Special Studies in Political Theory. (4) Lect- ure, three or four hours; discussion, one hour (when scheduled). Preparation: one course in Field I. Requi- site: course 10. Designed for juniors/seniors. Inten- sive examination of one or more special problems appro- priate to political theory. Sections offered on regu- lar basis, with topics announced in preceding term. May be repeated for credit with topic change. P/NP or letter grading.

M119A. Modern Receptions of Ancient Political Thought. (4) (Same as Classics M124.) Lecture, three hours. Designed for juniors/seniors. Study of how Western culture has conceived and reinterpreted polit- ical thought of ancient Greeks and Romans. Topics include examination of influential case(s) of modern reception of classical antiquity. P/NP or letter grading.

Field II: International Relations

120A. Foreign Relations of U.S. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Survey of forces and factors 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; dis- cussion, one hour (when scheduled). Designed for ju- niors/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. Limited to juniors/ seniors. Examination of U.S. intelligence agencies from 9/11 and Iraq war, few organizations are more important and less understood. Course separates fact from fic- tion, comparing how intelligence agencies are portray- ed in popular entertainment to how they operate in practice. Fundamentals of intelligence collection (from satellites to spies) and analytic tradecraft; key challenges such as roles of ethics in intelligence, perfor- mance, and public scrutiny. Can’t We All Just Get Along? and intelligence community’s ability to adapt to rise of terrorism. Application of general concepts to specific case studies of Cuban missile crisis, 2003 Iraq war, and September 11, 2001, terrorist attacks. P/NP or letter grading.

121A. Studies in Formulation of American Foreign Policy. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Study of American foreign policy with respect to individual cases. Consult Schedule of Classes for topics to be offered in specific term. P/NP or letter grading.

121B. Conflict Decision Making in U.S. Foreign Policy. (4) (Same as Public Policy CM117.) Lecture, three or four hours; discussion, one hour (when scheduled). Recommended requisites: courses 120A, 137A, 137B. In-depth look at theory and practice of U.S. foreign policy-making. Assessment of competing theories of international relations and application to specific case studies. Weekly role plays of foreign policy-makers and final crisis simulation exercise. Letter grading.

122A. World Order. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Requisite: course 20. Designed for juniors/seniors. Study of problems of international system seen as community capable of cooperation and development. P/NP or letter grading.

M122B. Global Environment and World Politics. (4) (Same as Environment M161.) Lecture, three or four hours; discussion, one hour (when scheduled). Recommended requisite: course 20. Requisites: courses 20, 137A, 137B. Development of modern environmental awareness, scientific understanding, and global political awareness. Course separates fact from fic- tion, and global political awareness. Course separates fact from fiction, and global political awareness. Course separates fact from fiction, and global political awareness.

123A-123B. International Law. (4-4) Lecture, three or four hours; discussion, one hour (when scheduled). Requisite: course 20. Course 123A is requisite to 123B. Designed for juniors/seniors. Study of the nature and place of international law in conduct of international relations. Letter grading.


124B. Comparative Foreign Economic Policy. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Requisite: course 20. Designed for junio- rs/seniors. Examinations of foreign economic policies of major regular basis, with topics announced in preceding term. May be repeated for credit with topic change. P/NP or letter grading.


126. Peace and War. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Requisite: course 20. Designed for juniors/seniors. Theory and research on causes of war and conditions of peace.


128B. International Relations of Post-Communist Russia. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Survey of foreign policy of post-Communist Russia, with special em- phasis 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) Lecture, three or four hours; discussion, one hour (when scheduled). Requisi- tes: courses 20 or 137A. Designed for juniors/seniors. Analysis of role of diplomacy in great power politics, history of diplomatic institutions, advantages of public and private diplomacy, bilateral and multilateral set- tings, and theory and practice of deterrence and co- ercion. Use of game theoretic reasoning and historical analysis. Prior exposure to both useful but not re- quired. P/NP or letter grading.

131. Latin American International Relations. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Requisite: course 20. Designed for juniors/seniors. Major problems of Latin American interna- tional relations and organization in recent deca- des.

132A-132B. Internation Relations of Middle East. (4-4) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Analysis of role of diplomacy in great power politics, history of diplomatic institutions, advantages of public and private diplomacy, bilateral and multilateral set- tings, and theory and practice of deterrence and co- ercion. Use of game theoretic reasoning and historical analysis. Prior exposure to both useful but not re- quired. P/NP or letter grading.

133. International Relations of Sub-Saharan Afri- ca. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Contemporary regional issues and conflicts; foreign policies of African states; role of external powers.

134. Foreign Policy Decision Making and Tools of Statecraft. (4) Lecture, three or four hours; dis- cussion, one hour (when scheduled). Requisite: course 120A. Designed for juniors/seniors. Contrasts purpo-
sive and process models of individual and group decision making. Impact of strategic interaction and situation 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 juniors/seniors. Classic period of European great power politics, beginning with peace settlement at end of Napoleonic wars and ending with coming of World War I. P/NP or letter grading.

138B. International Politics, 1914 to the Present. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for juniors/seniors. 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.

M139B. Nuclear Weapons: Critical Decisions. (4) Same as Environment M165, Honors Colloquium M119, and Public Policy M116.) Lecture, three hours. Examination of 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 president. Designed for juniors/senior 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.

M141A-141E. Electoral Politics. (4 each) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for juniors/seniors. P/NP or letter grading.

M141A. Political Psychology. (4) Same as Psychology M138.) Lecture, three or four hours; discussion, one hour (when scheduled). Requisite: course 40. Designed for juniors/seniors. Examination of political behavior, political socialization, personality and politics, racial conflict, and psychological analysis of public opinion on such topics as elections and political campaigns.

141B. Public Opinion and Voting Behavior. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Requisite: course 40. Designed for juniors/seniors. Study of character and formation of political attitudes and public opinion. Role of public opinion in elections, relationship of political attitudes to the vote decision, and influence of public opinion on public policy formulation. P/NP or letter grading.

141C. Political Behavior Analysis. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Requisites: courses 6, 40, 141B. Designed for juniors/seniors. Advanced course in use of quantitative methods in study of political behavior, especially in relation to voting patterns, political participation, and techniques of political action. Students conduct computer-aided analyses of issues and problems treated in course 141B and similar courses. P/NP or letter grading.

M141D. Mass Media and Elections. (4) (Same as Communication Studies M161.) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Examination of means and media, including game-theoretic analysis, Downs spatial model of elections, validated election campaigns, campaign finance, endogeneity problems in social sciences, liberal bias in media, industrial organization of news industry, and effects of media on voter decisions. May be applied toward Field III or V. P/NP or letter grading.

142A-142B-142C. Political Parties and Interest Groups. (4-4-4) Lecture, three or four hours; discussion, one hour (when scheduled). Requisite: course 30. Designed for juniors/seniors. Analysis of elections and media, including game-theoretic analysis, Downs spatial model of elections, validated election campaigns, campaign finance, endogeneity problems in social sciences, liberal bias in media, industrial organization of news industry, and effects of media on voter decisions. May be applied toward Field III or V. P/NP or letter grading.

143A-143B-143C. Subnational Government. (4-4-4) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for juniors/seniors. P/NP or letter grading. 143A. American State Government. Requisite: course 40. Examination of governments of states of federal union as major sources of public policy in the U.S. Emphasis on California as a special topic. 143B. Government of American Cities. Requisite: course 40. Intensive analysis of contemporary urban governance in the U.S. Emphasis on such student participatory activities as fieldwork, research, and gaining of urban politics and policy problems.

144A. Globalization, Democracy, and Citizenship in Southern California Region. Study of political transformation of Southern California region. Major themes include (1) globalization, restructuring, and regional development, (2) citizenship, democracy, and regional governance, (3) effects of globalization processes on contemporary local politics, (4) effectiveness of political structures and electoral politics.

145A-145E. Public Law and Judicial Process. (4 each) Lecture, three or four hours; discussion, one hour (when scheduled). Requisite: course 40. Designed for juniors/seniors. P/NP or letter grading.

145A. Anglo-American Legal System. (4) Lecture, three or four hours; discussion, one hour (when scheduled). P/NP or letter grading.

145B. Constitutional Law — Separation of Powers. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Constitutional questions concerning separation of powers, federalism, and relationship between government and property. 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. Protection of civil and political rights and liberties under constitution. P/NP or letter grading.

146A-146F. Governing the Bureaucracy. (4 each) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Legal controls of administration action. Substantive and procedural rules on administrative discretion imposed by legislation, executive and judicial agencies, and sources of legal powers of administrative bodies within these limits. P/NP or letter grading.

146E. Judicial Oversight of Bureaucracy. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Protection of civil and political rights and liberties under constitution. P/NP or letter grading.

146F. Legal Structure of Courts. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for juniors/seniors. P/NP or letter grading.

146G. Governing the Bureaucracy in the U.S. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Role of the judiciary in the legal system. P/NP or letter grading.
felder on regular basis, with topics announced in preceding term. May be repeated for credit with topic change. P/NP or letter grading.

Also see course 117

Field IV: Comparative Politics

150. Political Violence. (4) Formerly numbered 118.) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Examination of one or several different uses of violence in revolutionary process: demonstrations, mass uprisings, coup d’etat, assassination, and terrorism. P/NP or letter grading.

151A-151B. 151C. African Politics. (4-4-4) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Letter grading.

151A. Government and Politics of Africa. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Comparative study of government and politics in contemporary Africa, with special attention to state/society relations, interaction of politics and economic development, political institutions, and conflict and conflict resolution. Letter grading.

151B. Political Economy of Africa. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Examination of interaction 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.

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. Constitution and political structure and development of one or more states in Europe, especially Britain, France, or Germany, with particular attention to contemporary problems. P/NP or letter grading.

152A. Britain; 152B. France; 152C. Germany.

153A-153B. Comparative Government and Politics of West European States. (4-4) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Letter grading.

153A. West European Government and Politics. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Comparison of constitutional and political structure of West European states, with particular attention to contemporary problems. P/NP or letter grading.

153B. Game-Theoretic Approach to West European Politics. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Uses of elementary game theory to investigate post-World 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. Preparation: 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, organization, and practices. P/NP or letter grading. 154A. Latin America. Enforced requisite: course 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. Comparative study of pluralistic democracies, analyzed in comparative framework, topic by topic. Emphasis on cross-Atlantic comparisons, not only between political systems.
Field V: Methods and Models

170A. Studies in Statistical Analysis of Political Data. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Enforced requisite: course 6 or 8R. Required. Use of statistical methods to interpret data and test theories from various fields in political science and use of quantitative evidence in construction of convincing and truthful arguments related to world of politics. Consult Schedule of Classes for topics to be offered in specific term. P/N or letter grading.

171A. Applied Formal Models: Collective Action and Social Movements. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Requisites: course 30. Designed for juniors/seniors. How do social and political movements convince people to participate? Consideration of various theoretical perspectives, including game-theoretic, social network, structural, and identity approaches, illustrated by case studies. P/N or letter grading.

171B. Collective Choice and Majority Rule. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Requisite: course 30. Designed for juniors/seniors. How do different ways of counting and casting votes affect political decisions? When can voting rules be manipulated by leaders and voters? Examples from legislative, electoral, and judicial politics. P/N or letter grading.

171C. Legislative Strategy. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Requisite: course 30. Designed for juniors/seniors. How do politicians get policy changes passed by legislatures, city councils, and other voting bodies? Applications of game-theoretic reasoning to common strategies and tactics in legislative settings. P/N 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 its applications to real-world contexts. Experimental exercises with emphasis on various aspects of negotiation, including coalition formation, honesty, and role of agents. P/N or letter grading.

172. Strategy and Conflict. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Enforced requisite: course 30. Designed for juniors/seniors. Intermediate topics in game theory applied to political problems, with special attention to strategic consequences of information and information asymmetries. P/N or letter grading.

179. Special Topics in Methods and Models. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Enforced requisite: course 30. Designed for juniors/seniors. Intensive examination of one or more special problems related to methods and models in political science. Sections offered on regular basis, with topics announced in preceding term. May be repeated for credit with topic change. P/N or letter grading.

Field VI: Race and Ethnic Politics

M180A. African American Political Thought. (4) (Formerly numbered M114C.) (Same as Afro-American Studies M114C.) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Culture, history, politics, and identity of African Americans in Spanish and Lusophone Caribbean, South America, and Central America. Exploration of issues of identity in context of Afro/Latino migration to U.S. P/N or letter grading.

M180B. Black Experience in Latin America and Caribbean I. (4) (Formerly numbered M184A.) (Same as Afro-American Studies M154C.) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Culture, history, politics, and identity of African Americans in Spanish and Lusophone Caribbean, South America, and Central America. Exploration of issues of identity in context of Afro/Latino migration to U.S. P/N or letter grading.

M184B. Black Experience in Latin America and Caribbean II. (4) (Same as Afro-American Studies M154D.) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Examination of issues regarding race and ethnicity in Latin America, with emphasis on comparisons to U.S. and within Latin America. Covers populations of African and indigenous origins, with emphasis on former. P/N or letter grading.

Special Studies

190. Research Colloquia in Political Science. (1) Seminar, one hour. Designed to bring together students undertaking supervised tutorial research in seminar setting with one or more faculty members to discuss their own work or related work in discipline. Letter grade only. May be repeated for credit. P/N or letter grading.
190H. Honors Research Colloquium in Political Science. (1) Seminar, one hour. Designed to bring together students enrolled in honors theses in seminar setting with one or more faculty members to discuss their thesis work in progress. Led by one supervising faculty member. P/NP grading.

191A-191E. Variable Topics Research Seminars for Majors. (4) May be repeated for credit. Required of all students who wish to write honors theses. Students define their research topic, select suitable research methods, determine appropriate sources of information, prepare a research proposal, begin their research, and submit progress reports or preliminary drafts. Class sessions emphasize critical and constructive discussions of students’ topics, methods, and problems in research, as well as general consideration of political science research topics and methods of current and continuing interest. May be repeated for credit. Letter grading.

193. Journal Club Seminars: Political Science. (1) Seminar, one hour. Required of all students who wish to write honors theses. Students define their research topics, select suitable research methods, determine appropriate sources of information, prepare research proposals, begin their research, and submit progress reports or preliminary drafts. Class sessions emphasize critical and constructive discussions of students’ topics, methods, and problems in research, as well as general consideration of political science research topics and methods of current and continuing interest. May be repeated for credit. Letter grading.

194. Research Group Seminars: Political Science. (2) Seminar, three hours. Designed for undergraduate students who are part of research group. Discussion of research methods and current literature in field of research of faculty members or students. May be repeated for credit. P/NP grading.

M191DC. CAPPP Washington, DC, Research Seminars. (4) (Same as History M191DC and Sociology M191DC.) Seminar, three hours; laboratory, 24 hours. Limited to CAPPP Program students. Seminars for undergraduate students in Center for American Politics and Policy Studies Program in Washington, DC. Focus on development and execution of original empirical research based on experiences from Washington, DC-based field placements. Study of variety of qualitative research methods, interviewing, etc., with comparison to quantitative analysis. Examination of features of solid and significant research; intensive writing. Letter grading.

190I. 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. Required of all students who wish to write honors theses. Students define their research topic, select suitable research methods, determine appropriate sources of information, prepare a research proposal, begin their research, and submit progress reports or preliminary drafts. Class sessions emphasize critical and constructive discussions of students’ topics, methods, and problems in research, as well as general consideration of political science research topics and methods of current and continuing interest. May be repeated for credit. Letter grading.


200CL. Statistical Methods Laboratory III. (4) Laboratory, three hours. Requisites: courses 200A, 200B. Corequisite: course 200C. Study of theory and application of linear regression analysis in political and social sciences. Starting with basic knowledge of probability theory and statistics, investigation of computation and interpretation of regression results, their statistical justifications, for violations of assumptions, stability of results under perturbations of data and models, and extensions into nonstandard situations. Topics may include classical linear model, statistical inference and hypothesis testing, vector geometry of regression, diagnostics, weighted least squares, cross validation and model selection, resam-
204C. Game Theory in Politics III. (4) Seminar, three hours; fieldwork, eight hours. Requisites: courses 204A, 204B. Three-hour seminar, with emphasis on new and/or advanced techniques. Topics include timing games, stochastic games, and mechanism design. Applications concern bureaucracies, conflict mediation, and political transitions. Designed to help students use advanced game theory in their research. S/U or letter grading.

204B. Topics in Applied Game Theory. (4) Same as Economics M215.) Lecture, three hours. Preparation: course 204A, or permission. Description of game models and strategic interactions. Designed for graduate economics and political science students. Survey and applications of major solution concepts to models of bargaining, oligopoly, cost allocation, and voting and lobbying. S/U or letter grading.

200D. Multivariate Analysis with Latent Variables. (4) (Same as Psychology M257 and Statistics M242.) Lecture, three hours. Introduction to models and methods for analysis of data hypothesized to be generated by unmeasured latent variables, including latent variable analogues of traditional methods in multivariate analysis. Causal modeling: theory testing via analysis of moment structures. Measurement models as nested and, higher-order, and structured-means factory analytic models. Structural equation models, including path and simultaneous equation models. Parameter estimation, hypothesis testing, measurement issues, computer implementation. Applications. S/U or letter grading.

200E. Bayesian Econometrics. (4) (Same as Economics M232A.) Lecture, three hours. Requisites: Economics 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.

209. Special Topics in Formal Theory and Quantitative Methods. (4) Seminar, three hours. S/U or letter grading.

Political Theory


214. Political Theory in Transnational Context. (4) Seminar, three hours; discussion, one hour (when scheduled). Requisites: course 200A or letter grade in another political theory course. Critical analysis of theoretical and empirical issues in the study of international organizations and comparative political institutions. S/U or letter grading.

215. Liberalism and Its Critics. (4) Seminar, three hours; discussion, one hour (when scheduled). Examination of works of one or more major contemporary liberal theorists (Rawls, Dworkin, Habermas, Nussbaum, etc.) in light of alternatives which have been proposed to the liberal peace tradition (communitarianism, post-structuralism, group rights theories, etc.). S/U or letter grading.

216. Tolerance, Pluralism, and Diversity. (4) (Same as Public Policy M248.) Seminar, three hours. Prior permission use course helpful. Exploration of both abstract concepts of tolerance and contemporary disputes. S/U or letter grading.

217. Selected Texts in Political Theory. (4) Seminar, three hours. Critical examination of major texts in political theory. Three-hour seminar, with attention to the political and intellectual currents, and importance of system for present-day political analysis. S/U or letter grading.

218. Selected Topics in Political Theory. (4) Seminar, three hours. Critical examination of major problems in political theory. S/U or letter grading.


International Relations

220A. International Relations Core Seminar I. (4) Seminar, three hours. Introduction to international relations theory; main schools of thought, methods of analysis, and research styles. Letter grading.

220B. International Relations Core Seminar II. (4) Seminar, three hours. Further analysis of academic work in international relations and introduction to design of research project in this area. Letter grading.

220C. International Relations Research Seminar. (4) Seminar, three hours; meetings, to be arranged. Design, implementation, and presentation of research project in international relations within combination of seminar and tutorial settings. Letter grading.

222. Seminar: Strategic Interaction. (4) Seminar, three hours. A strategic move influences the other person’s choice by affecting his expectations of how we will behave. Discussion of theories of deterrence, collective decision, crisis management, war termination, and negotiation. Use of various theoretical approaches to explaining strategic interaction, including psychology, bargaining theory, and game theory.


225. American Foreign Policy. (4) Discussion, three hours. Discussion of approaches used to explain foreign-policy-making at individual, small group, bureaucratic, and domestic politics levels. Application to selected cases in American foreign policy.


230. Contending Perspectives on International Political Economy. (4) Discussion, three hours. Survey of various theoretical approaches to international political economy.

231. International Political Economy I. (4) Seminar, three hours. Interaction between international trade and investment and domestic political economies of both industrializing and socialist societies. S/U or letter grading.

232. International Political Economy II. (4) Seminar, three hours. Designed to develop Ph.D. students’ skills in setting up and solving simple institutional design, political economy macro, signaling, and partition modeling, 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. International Economy Workshops (4–4–4). Discussion, two hours. Preparation: successful completion of major field examinations. Workshops for students writing or preparing to write dissertation. 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 required to 234B, which is required to 234C. Courses must be taken in sequence. Workshops for students preparing for or working on dissertations. Reading and discussion of research in progress presented by UCLA faculty, visiting scholars, and advanced graduate students. Major research paper required. In Progress (234A, 234B) and letter (234C) grading.

239. Selected Topics in International Relations. (4) Seminar, three hours. S/U or letter grading.

Comparative Politics

240A-240B. Seminars: Comparative Politics. (4–4) Seminar, three hours; discussion, one hour (when scheduled). Requisites: courses 240A is not requisite to 240B. Letter grading. 240A. Survey of ideas and approaches that have been historically important in field of comparative politics, with selection of theories and methodologies that have comprised field over time.

240B. Seminar of contemporary research approaches and problems in field of comparative politics, with a range of theories and methodologies used by practitioners in the field.


244. Latin American Politics. (4) Seminar, three hours. Survey of contemporary research approaches and problems in Latin American politics. S/U or letter grading.

245. Middle Eastern Politics. (4) Seminar, three hours. Survey of contemporary research approaches and problems in Middle Eastern politics. S/U or letter grading.

246A. Western European Politics. (4) Seminar, three hours. Survey of contemporary research approaches and problems in Western European politics. S/U or letter grading.

246B. Political Development of Modern Europe. (4) Seminar, three hours; discussion, one hour (when scheduled). Principal phases of political development from high feudalism to the present, together with theories of causation.


247A. Evolution of Soviet and Russian Politics. (4) Seminar, three hours; discussion, one hour (when scheduled). Discussion seminar surveying political evolution of Soviet Union and its transformation.

247B. Domestic Context of Russian Foreign Policy. (4) Seminar, three hours. Examination of domestic social, political, bureaucratic, and organizational sources of Russian foreign and strategic policy. S/U or letter grading.


251. Political Economy of Economic Reform. (4) Discussion, three hours. Some familiarity with economics helpful. Principles 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 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 convergence.

254A-254B. Institutions and Comparative Politics. (4–4) Seminar, three hours; discussion, one hour (when scheduled).
254A. Comparative Institutional Analysis. (4) Seminar, three hours; discussion, one hour (when scheduled). Use of advanced topics in political theory and new institutionalism to compare and analyze major institutional structures, including presidentialism vs. parliamentary system, unicameralism vs. bicameralism, two-party vs. multiparty systems, cadre vs. mass parties, and pluralism vs. proportional representation. 254B. Political Institutions, Delegation, and Policy-Making. (4) Seminar, three hours; discussion, one hour (when scheduled). Analysis of political foundations of policy-making. Characterization of democratizing institutions as a series of delegations, from voters to elected officials, within parties and legislatures, and from elected politicians to unelected bureaucrats. Examination of implications of different institutional design for how those delegations are made and controlled.


256. External Sources of Domestic Politics. (4) Discussion, three hours. Theoretical and historical studies of impact of war and trade on domestic cleavages, policy, and institutions. S/U or letter grading.

257. Labor and Working-Class Politics. (4) Discussion, three hours. Questions and topics on comparative labor and working-class politics. S/U or letter grading.

258. Comparative Politics Prosseminar. (2) Seminar, 90 minutes. Biweekly speaker series featuring presentation of unpublished research papers by comparative politics faculty and as well as external scholars. Required participation and written assignments. S/U grading.


American Politics


M261A. Prosseminar: Political Psychology. (4) (Same as Psychology M228B.) Seminar, three hours. Introduction to political psychology: psychobiography, personality and politics, mass attitudes, group conflict, political communication, and decision making.

M261B. Mass Attitudes and Political Behavior. (4) Seminar, three hours. Requisite: course 141B or 260A. Analysis of development and change of political attitudes in mass publics and their relationship to voting, protest, and violence. S/U or letter grading.

M261C. 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 deferential journalism, and analyses of media bias.

M261D. Seminar: Political Psychology. (4) (Same as Psychology M228B.) Discussion, three hours. Requisite: course M261A or Psychology 220A. Examination of political behavior, political socialization, racial conflict, mass political movements, and public opinion. S/U or letter grading.

M261E. Critical Problems in Political Psychology. (4) (Same as Psychology M228C.) Discussion, three hours. S/U or letter grading.

262. Political Parties. (4) Seminar, three hours. Critical examination of literature on party systems and organizations. Special attention to political functions, electoral campaigns, and party cadres. S/U or letter grading.


265. Politics and Economy. (4) Discussion, three hours. Analysis of theoretical and practical relationships between economic organization and governmental institutions. Development and political implications of international market system, banking and finance, corporate enterprise, and organized labor. 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 M246B) Seminar, three hours. Examination of both empirical and normative questions from rich variety of perspectives for scholars in all subfields of political science as well as policy students and others interested in these issues. Consideration of topics fundamental to both democratic theory and 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 empirical research in American political behavior. Letter grading.


270. Legislative Behavior. (4) Seminar, three hours. Analysis of major approaches to study of representative institutions, with special emphasis on assumptions, concepts, methods, and theoretical implications associated with each approach. S/U or letter grading.

271. Executive Politics and Presidency. (4) Seminar, three hours. Analysis of executive organization and leadership, with emphasis on American Presidency. Special attention to theories of organization and personality and relationship between executive and other institutions and groups. S/U or letter grading.

272. Political Environment of Federal Executive. (4) Discussion, three hours. Examination of political environment of federal executive in the U.S. Special attention to executive Legislative relations. S/U or letter grading.


284. Seminar: Bureaucracy and Organization. (4) Seminar, three hours. Exploration of topics in analysis of public and private bureaucracy and organizational theory. Topics include empirical theories of bureaucratic behavior; bureaucratic growth; bureaucratic behavior and political culture; organizational structures and strategies; and function of executive. S/U or letter grading.

Race, Ethnicity, and Politics

M287A-M287B. Immigration, Racial Change, and Education in 21st-Century Americas. (4-4) Same as Education M289A-M289B, Public Policy M289A-M289B, and Sociology M290A-M290B.) Seminar, four hours. Examination of metropolitan American society and institutions at beginning of 21st century. Consideration of best available information on patterns of settlement, changing functions of urban space and institutions, and issues of opportunity linked to urban structure, society facing 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 work 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 (M287A) and letter (M287B) grading.

289A. Approaches to Study of Race, Ethnicity, and Politics. (4) Seminar, three hours. Analysis of alternative theoretical, methodological, and empirical approaches to study of race, ethnicity, and politics. S/U or letter grading.

289B. Current Research on Race, Ethnicity, and Politics. (4) Seminar, three hours. Exploration of current research on race, ethnicity, and politics. S/U or letter grading.

Special Studies

290. Modern Political Economy. (4) Discussion, three hours. Discussion of implications for understanding of theories of thinking of politicians, bureaucrats, producers, consumers, and nations as utility maximizers. Topics include microfoundations for macroeconomic, forms of political participation, state, government regulation, growth of government, bureaucracy elections, public policy, inflation. S/U or letter grading.


293. Great Ideas in Social Sciences. (2) Seminar, two hours. Vehicle for faculty and visitors to teach research seminars of variable length. Special training opportunities on advanced quantitative methods, including complex theory, agent-based modeling, experimental economics, social cognitive neuroscience, and evolutionary psychology, to be offered at irregular intervals. May be repeated for credit. S/U grading.

375. Teaching Apprentice Practicum. (1 to 4) Seminar, three to ten hours. Teaching apprenticeship under active guidance and supervision of regular faculty member responsible for curriculum and instruction at UCLA. May be repeated for credit. S/U grading.

495. Teaching Political Science. (4) Seminar, to be arranged. May be repeated for credit. S/U grading.

501. Cooperative Program. (2 to 8) Preparation: consent of UCLA graduate adviser and graduate dean, and host campus instructor, department chair, and graduate dean. Used to record enrollment of UCLA students in courses taken under cooperative arrangements with USC. S/U grading.

596. Directed Individual Study or Research. (2 to 12) Tutorial, to be arranged. May be applied only three times toward minimum course requirement in first two years. May be repeated. S/U or letter grading.
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 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 va-
University of California, Los Angeles

Psychiatry and Biobehavioral Sciences

Upper Division Courses

175. Mindfulness Practice and Theory. (4) Seminar, five hours. Designed for beginners; prior experience with meditation not required. Introduction to mindfulness, including basic mindfulness meditation practices, both sitting and moving, ways to deepen positive emotions like gratitude, kindness, and joy, and methods for integrating more awareness and creativity into ordinary activities. Examination of varying meditative traditions as well as emerging science on beneficial effects of mindfulness practice for mental and physical health. Prerequisites: Introduction to mindfulness meditation required. S/U grading.


181. Biological Bases of Psychiatric Disorders. (4) (Same as Molecular, Cell, and Developmental Biology M181; Neuroscience M130; Physiological Science M180; Molecular, Cell, and Developmental Biology M175.) Lecture, three hours. Corequisite: Neuroscience M101A (or Molecular, Cell, and Developmental Biology M175a or Physiological Science M180A or Psychology M117A) or Neuroscience M117A or Psychology 115. Uncovering brain systems involved in psychotic 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.

181A. Research in Contemporary Problems in Developmental Disabilities. (4) (Same as Psychology M181A.) Lecture, one hour; laboratory, eight hours. Corequisite: course M180. Limited to Developmental Disabilities Program students. Research experience. In Progress grading (credit to be given only on completion of course M181B).


182. Personal Brain Management. (4) Seminar, three hours. Corequisite: course M182. Personal development of practical skills of relational mindfulness in interactions with others. Offered in summer only. P/NP or letter grading.

Graduate Courses


M214. Cross-Cultural Studies of Socialization and Children. (4) (Same as Anthropology M236P.) Seminar, three hours. Selected topics in cross-cultural study of socialization and child training. Methods, ethnographic data, and theoretical orientations. Emphasis on current research.

M222. Transcultural Psychiatry. (4) (Same as Anthropology M234F.) Lecture, three hours. Consideration of psychotropic topics in cross-cultural perspective, such as studies of drug use, deviance, suicide, homicide, behavioral disorders, “culture specific” syndromes, non-Western societies. “Sick” societies may be repeated for credit.


M230. Communication of Science. (2) (Same as Biometrics M262J.) Lecture, two hours; discussion, one hour. Presentation of various types of scientific writings and their good practice. Details of writing specific articles: methods, results, discussion. Writing of review article. Grant submissions: aims, background, results, design. Role of apprentices. Communication with lay people. P/NP or letter grading.


M234. Affective Disorders. (2 or 4) (Same as Psychology M280.) Seminar, two hours. General topics related to affective disorders (depression, manic depressive illness), including diagnosis, pharmacotherapy, 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.

236A-236B-236C. Psychology Interns Seminars. (1-1-1) Seminar, 90 minutes. Current topics in clinical psychology. Group-selected topics for discussion pertaining to psychopharmacology, diagnostic evaluation, and medical management of some psychiatric syndromes. P/NP or letter grading.

237. Seminar: Behavioral Neuroimmunology. (1) Seminar, one hour per month; discussion, 30 minutes per month. Series of lectures presented the second Wednesday of each month throughout academic year by invited speakers. S/U grading.

M238. Survey Research Techniques in Psychocultural Studies. (4) (Same as Psychology M238.) Seminar, three hours. Designed for graduate students. Techniques for conceptualizing, conducting, and analyzing survey data; instruction in qualitative strategies for enhancing survey research on psychocultural problems.

M240. Assessment and Treatment of African American Families. (3) (Same as Afro-American Studies M240J.) Seminar, two hours. Designed for graduate students. Course aids mental health professionals and trainees in evaluation and treatment of African American families in various clinical milieus, historical background, and economic status. Didactic presentations by instructors and invited guests form basis for supervised evaluation and case management with African American children and families. Letter grading.


M246. Psychological Aspects of Mental Retardation. (4) (Same as Psychology M246.) Lecture, 90 minutes. Discussion of psychological aspects of mental retardation, including classification, description, etiology, theory, prevention, treatment, assessment, modern and future developments, and input from other disciplines (ethics, law, religion, welfare systems). S/U or letter grading.

253. Seminar: Child Development. (1) Theories of development, systems of child development, and chronological aspects of child development. Presentations and assigned readings by students play a major role in each session.


259. Legal and Ethical Issues with Vulnerable Populations. (3) Lecture, 90 minutes; laboratory, three and one-half hours. Discussion of current laws dealing with vulnerable populations (e.g., children, developmentally disabled people, elderly people) philosophies, ethics, ethical codes, issues, and how to resolve them. Use of videotapes and discussion of cases.


M263. Clinical Pharmacology. (2) (Same as Biostatistics M263 and Medicine M263.) Lecture, two hours. Preparation: completion of professional health sciences degree (M.D., Ph.D., D.O.). Overview of principles of clinical pharmacology, especially as they relate to clinical and translational medi
cine and to advances in contemporary medicine such as targeting, gene therapy, and genomics. Letter grading.

264. Health and Mental Health Disparities from Psychosocial and Cultural Perspectives. (4) Seminar, three hours. Designed for graduate and medical students, resident physicians, and juniors/seniors (with instructor approval); interested students are taught about general, sexual, and mental health disparities. Survey course to introduce students to health disparities that exist for ethnic minorities and factors that may contribute to disproportionate prevalence rates. Review and discussion of research literature, with focus on specific diseases such as HIV/AIDS, substance abuse, depression, and breast and prostate cancer. Emphasis on principles, theories, and research related to improving healthcare of ethnic populations. Examination of psychosocial and cultural contexts as potential or contributing factors. S/U or letter grading.

266A. Advanced Magnetic Resonance Imaging. (4) (Same as Biomedical Physics M266 and Neuroscience M267.) Lecture, four hours. Starting with basic principles, presentation of physical basis of magnetic resonance imaging (MRI), with emphasis on developing and interpreting images in biomedical research, including both structural and functional studies. Instruction more intuitive than mathematical. Letter grading.

272. Neural Basis of Memory, (4) (Same as Neuroscience M272.) Lecture, two hours; discussion, one hour. Anatomical, physiological, and neurobiological 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.

272M. Psychological Anthropology. (4) (Same as Anthropology M234G.) Lecture, three hours. Various psychological issues in anthropology, both theoretical and methodological. Areas of interest include such things as culture and theory, culture and personality, and culture and psychology. Discussion of questions relating to symbolic and unconsciousness processes as they relate to culture. Topics vary from term to term. May be repeated for credit.

273M. Advanced Seminar: Medical Anthropology. (2 to 4) (Same as Anthropology M265C, Community Health Sciences M244, and Nursing M273.) Seminar, three hours. Limited to 15 students. Examination of interrelationships between society, culture, ecology, health, and illness. Bases for written critical analysis and oral discussions generated through key theoretical works. S/U or letter grading.


277M. Cognitive Behavior Therapy with Children: Treatment and Systems of Care. (2 or 4) (Same as Psychology M285S.) Seminar, 90 minutes. Designed for graduate students. Cognitive/behavioral approaches to prevention and treatment of mental health problems in children. Examination of service delivery systems for treating troubled youth, and discussion of issues with respect to current systems of care. Major problems include conduct disorders, attention deficit disorder, depression, anxiety, and learning disabilities. Letter grading.

280A. Politics of Reproduction. (2 to 4) (Same as Anthropology M269P) Seminar, three hours. Examination of various ways that power, as it is structured and enacted in everyday activities, shapes human reproduction and biocultural processes. Exploring implications of research that 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, three hours; laboratory, seven hours. Supervised experience in classroom working with exceptional children in conducting systematic observations, administering formal assessments, and developing and carrying out individualized educational and behavioral programs. Theoretical background furnished through one-hour weekly lectures. S/U or letter grading.

282. Anthropological Perspectives on Human Body, (2 to 4) (Same as Anthropology M234T.) Seminar, three hours. Exploration of how sociocultural and political dynamics shape perceptions of and understandings about the human body, and how those perceptions and understandings influence social processes. Includes materials from both non-Western and Western societies. Letter grading.

283. Anthropology of Genetic Knowledge, (2 to 4) (Same as Anthropology M265B.) Seminar, three hours. Exploration of how sociocultural and political dynamics shape our understandings of genetic discoveries and how genetic information is used to create conceptions of self and society. Letter grading.

284A-M284B. Principles of Neuroimaging I, II, (4-4) (Formerly numbered 284A-284B.) (Same as Neuroscience M284A-M284B and Psychology M284A-M284B.) Lecture, four and one-half hours. Preparation and competence: Integral calculus, electricity and magnetism, computer programming (any language), general statistics. Requirement: course 292. Course M284A is requisite to M284B. Instrumental imaging methods, such as positron emission tomography, magnetic resonance imaging, transcranial magnetic stimulation, near infrared imaging. Letter grading.

285. Functional Neuroimaging: Techniques and Application, (2-2-2) (Same as Bioengineering M284, Biomedical Physics M285, Neuroscience M285, and Psychology M278.) Lecture, three hours. In-depth examination of activation imaging, including MRI and electroencephalography. Image acquisition and analysis, experimental design, and results obtained thus far in human systems. Strong focus on understanding technologies, how to design activation imaging, viewing brain images, and how to interpret results. Laboratory visits and design and implementation of functional MRI experiment. S/U or letter grading.

286A-M286B-M286C. Statistics in Psychiatric and Biobehavioral Research. (2-2-2) (Same as Biostatistics M286A-M286B and Psychology M286C.) Seminar, 90 minutes. Requirement: Biostatistics 100B. Designed for graduate students. Examples from psychiatric literature used to illustrate statistical ideas and analysis strategies. Techniques, data analysis, sample size calculations, parametric versus nonparametric tests, regression, ANOVA, factor analysis, defining composite variables, causal inference. Computer used to illustrate basic data analysis. S/U or letter grading.

287. Small Group Cognitive/Behavioral Interventions. (4) Lecture, three hours. Presentation of brief therapeutic interventions for adults and children at risk for suicide, depression, conduct problems, and HIV, with didactic and experiential techniques.

288. Social and Behavioral Factors of HIV/AIDS: Global Perspective. (4) (Same as Community Health Sciences M294A.) Lecture, four hours. Requirements: Community Health Sciences 100 and Epidemiology 100, or prior social sciences courses. Overview of social and behavioral factors which influence both transmission and prevention of HIV/AIDS throughout the world. Letter grading.

289. Intervention to Reduce HIV and Its Consequences. (4) (Same as Community Health Sciences M299.) Lecture, three hours. Examination of intervention methods and their effects using the framework of theory and research supporting efficacy of HIV inter- ventions for variety of high-risk populations. Letter grading.


291. Functional Magnetic Resonance Imaging and Consciousness Journal Club. (1) Seminar, three hours. Discussion forum for students to gain better appreciation of experimental neuroimaging methods and challenges in experimentation of higher and abstract cognitive processes. Readings of journal articles (selected by students and instructor) addressing topics in advanced applications of adequate background research to clarify material. S/U grading.


295A. (2) Seminar, two hours; discussion, one hour. Neurobiology and psychopharmacology of drug abuse, as well as epidemiology and prevention. Discussion of pros and cons of various treatment modalities for drug dependence. S/U grading.

295B. (2) Seminar, two hours; discussion, one hour. Drug use patterns and treatment issues in specific populations such as women, homeless, multiply diagnosed, as well as different ethnic populations. Exploration of relationship between drug abuse, sexuality, and HIV/AIDS. S/U grading.

295C. (2) Seminar, two hours; discussion, one hour. Neurobiology and psychopharmacology of drug abuse, as well as epidemiology and prevention. Discussion of pros and cons of various treatment modalities for drug dependence. S/U grading.

296. Research Group Seminar: Practicum, (2) Research group meeting, three hours. Designed for graduate students who plan to conduct research studies. Coverage of (1) publishing process — submitting manuscripts to appropriate journals, frequent reasons for journal rejection of manuscripts, and key points in writing articles for publication, (2) overview of National Institutes of Health (NIH), including organization structure and mission, grant application process, funding mechanisms, and review process, (3) preparing/writing grants for submission to NIH, including review of components of successful applications, criteria by which applications are judged, and what to emphasize in each section, (4) grant mechanisms specifically designed for new investigators, (5) human subjects section for grant applications and IRB issues, and (6) preparation of budgets (modular and detailed) and budget justification for NIH submissions. S/U or letter grading.

402. Journal Club. (1) Seminar, two hours; outside study, two hours. Presentation of participants’ current research. Critical review of recent articles on drug abuse. Training sessions included in areas in which fellows believe they have a recognized need. S/U grading.

403. Individual Case Supervision. (1 to 4) Prepara- tion: submission of written proposal to be structured by instructor and student prior to enrollment; addi- tional instruction and supervision available in Office of Education, 38-216 Semel Institute. One-to-one supervision of individual therapy cases, including analyses of patient data, supervision of ongoing treat- ment, informal didactic sessions on personality theo- ry, and applications to patient management. S/U or letter grading.
405. Trauma and Sexual Abuse Research Seminar.
(4) Seminar, three hours; discussion, one hour. Designed for graduate students and psychological residents. Seeks a two-year study of research on biobehavioral trauma, introduction to DSM-IV-TR criteria for posttraumatic stress disorder (PTSD), as well as biopsychosocial sequelae. Examination and evaluation of child and adult sexual abuse in context of being causative precursors of acute and chronic causes of PTSD. Evaluation of anostatic load, among others, with other psychiatric and medical students in context of neurological markers for PTSD. Review of current methods of treatment, including therapeutic and pharmacological interventions. Discussion of research methods particularly important for trauma research. S/U or letter grading.

407A-407B-407C. Clinical Hypnosis Seminars. (2-2-2) Formerly numbered 207A-207B-207C.) Seminar, two hours. Integrated, experientially oriented sequence with lecture, discussion, demonstration, practice, and assigned readings. Guest speakers with expertise in specific hypnotic applications and populations, and video programs included. Trainees and faculty members in health care professions as well as licensed healthcare providers from community (MCEP credit available) encouraged to enroll. For trainees in social work, psychology, and psychiatry, completion of minimum of one year of supervised training in psychotherapy or behavior therapy required. S/U grading.

407A. Cultural and historical context for hypnosis; development of technical competence in trance induction, deepening, management, and re-alerting; and gaining familiarity with trance experiences. 407B. Fundamentals of trance utilization, including diagnosis, creating safety, and facilitating experiential trance experience. 407C. Application of hypnotic interventions in specific clinical situations and with specific populations.

M424. Functional Magnetic Resonance Imaging Journal Club. (2) (Same as Biomedical Physics M424.) Discussion, 90 minutes. Limited to 10 students. Current topics in functional neuroimaging, with emphasis on novel applications, analysis, and acquisition methods. Presentation and critique of student papers. Overall emphasis on magnetic resonance imaging. Example areas include tractography through diffusion tensor imaging, jittered event-related experimental designs, parallel receiver MR imaging, integrated neurophysiological and image acquisition. S/U grading.


431A-431B-431C. Pediatric Neuropsychology: Assessment, Diagnosis, and Treatment Planning. (1-1-1) Seminar, one hour. Presentation of didactics on developmental disorders, pediatric syndromes, and acquired brain injury in children. Coverage of methods of assessment in children, with focus on neuropsychological testing. Presentation of differential diagnosis and treatment planning. S/U grading. 431A. Developmental disorders, including autism, Asperger’s, mental retardation, specific learning disabilities, and Attention Deficit/Hyperactivity Disorder. Current conceptualizations of these disorders used to form assessment techniques, including choice of instruments and interpretation of results. Practical issues in pediatric neuropsychology, including ethics, educational law, and interdisciplinary interventions. 431B. Neurodevelopmental disorders, head injury, low birth weight, tumors, and epilepsy. 431C. Implementation of research from previous two terms in case presentation format, supplemented with various guest speakers.

434. Seminar: Addiction Psychiatry. (1) Seminar, one hour. Cutting-edge information on basic and applied aspects of addiction psychiatry (neurobiology, pharmacology, genetics, and evidence-based medical and behavioral therapies) and opportunities for participants to collaborate with established scientists and medical students. S/U or letter grading.

449. Parent Training Intervention Workshop. (2) Lecture, 90 minutes; discussion, one hour. Advanced clinical trainees learn behavioral techniques of assessment and treatment of parent/child problems. Lectures, case presentations, and workshops on various skills necessary.

454. Advanced Topics in Neuropsychology. (1) Seminar, one hour. Coverage of topics in even years that involve interface of neuropsychology with other disciplines, such as cognitive and psychopharmacology, cognitive remediation, ecological validity of neuropsychological assessment, cognition and genomics, and psychometrics/test 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 versus explicit learning, types of attention, and models of executive processes. S/U grading.

468. Translational Neuroscience of Drug Addiction. (1) Lecture, one hour. Designed for graduate students. Students need cross-disciplinary knowledge to understand drug abuse etiology, behavior, consequences, and treatment. Coverage of major topics in drug addiction by emphasizing use of animal models to understand human addiction and to disclose how findings derived from human studies can be used to expand development of animal models. S/U grading.

479. Genetics Clinic Presentation. (No credit) Weekly clinical teaching session on patients seen in preceding genetics clinic. In-depth discussion on genetics of each disorder.

480. Analysis of Human Chromosome Studies. (1) Chromosome karyotypes prepared in cytogenetics laboratory during preceding week presented and discussed with reference to clinical findings. Teaching includes investigation of abnormal karyotypes and technical aspects of routine and specific chromosome stains.

482. Clinical Practicum in Childhood Anxiety and Related Disorders. (3) Clinic, two hours. Training in cognitive/behavioral assessment and treatment of children and adolescents with anxiety and related disorders. Didactic and experiential training, including direct patient care, clinical supervision, and participation in weekly team meetings. Letter grading.

485. Human Genetics Seminar. (No credit) Seminar, one hour. Preparation: introductory genetics course. Weekly lecture series intended for those interested in investigation of abnormal karyotypes and technical aspects of routine and special chromosome stains.

486. Clinical Practicum in Childhood Anxiety and Related Disorders. (3) Clinic, two hours. Training in cognitive/behavioral assessment and treatment of children and adolescents with anxiety and related disorders. Didactic and experiential training, including direct patient care, clinical supervision, and participation in weekly team meetings. Letter grading.

490. Educational Advocacy. (2) (Same as Law M431 Clinic.) Two hours (12 weeks). How to provide educational advocacy based on IDEA, ADA, and Section 504 of Rehabilitation Act on behalf of children with learning disabilities, behavior disorders, and mental retardation. S/U or letter grading.

596P. Individual Studies in Psychiatry. (2 to 12) Tutorial, to be arranged. Preparation: submission of written proposal outlining course of study (to be structured by instructor and student at time of initial enrollment. Additional information and course proposals now available in Office of Education, Room 38-216 Semel Institute. Directed individual research and study in psychiatry at graduate level. S/U or letter grading.

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Roman Cousins, Ph.D.
Keith H. Nuechterlein, Ph.D., In Residence
Steven P. Reise, Ph.D.
Rena L. Repetti, Ph.D.
Dario L. Ringach, Ph.D.
Tara K. Scanlan, Ph.D.
Sue L. Schmidt, M.D., Ph.D.
David O. Sears, Ph.D.
Alcino J. Silva, Ph.D.
Annette L. Stanton, Ph.D.
James W. Stigler, Ph.D.
Bernard Weiner, Ph.D.
Cindy M. Yee-Bradbury, Ph.D.
Alan L. Yuille, Ph.D.
Eran Zaidel, Ph.D.

Professors Emeriti
Jackson Beatty, Ph.D.
William E. Broen, Jr., Ph.D.
Barry E. Collins, Ph.D.
Andrew L. Comrey, Ph.D.
Seymour Feshbach, Ph.D.
Morton P. Friedman, Ph.D.
Charles R. Gallistel, Ph.D.
John Garcia, Ph.D.
Rochele Gelm, Ph.D.
Gerald M. Goodman, Ph.D.
Barbara A. Henker, Ph.D.

Academic Personnel
Elizabeth L. Bjork, Ph.D.
Annette L. Stanton, Ph.D.
Alcino J. Silva, Ph.D.
Stanley J. Schein, M.D., Ph.D.
Howard S. Adelman, Ph.D.
William E. Broen, Jr., Ph.D.
Barbara A. Henker, Ph.D.
Andrew L. Comrey, Ph.D.
Seymour Feshbach, Ph.D.
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Barbara A. Henker, Ph.D.
The undergraduate curriculum has been designed to reflect the extensive breadth of psychology — both the range of behavioral phenomena studied and the variety of methods and theoretical approaches employed — while allowing students to pursue in greater depth those areas in which they become most interested. Beyond basic core courses, students can take many specialized courses in areas such as behavioral neuroscience, animal behavior, learning and memory, motivation, perception, cognition, measurement, personality, and clinical, social, developmental, community, and health psychology. The curriculum also provides excellent opportunities for research experience — either in the form of laboratory courses or by participation with faculty members and graduate students in a wide variety of research projects.

A choice of three undergraduate majors is offered: a 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**

The Cognitive Science major is a designated capstone major. Students are required to produce a paper based on each term of their experience in a research laboratory or approved fieldwork site. Through completion of the capstone experience students are expected to identify a research topic and hypothesis to be tested or a fieldwork project and goals, show that they can organize and integrate information related to the topic or project in a clear manner in their own words, demonstrate ability to find and utilize supporting literature relevant to their project or topic, and successfully relate the paper to their experience in the laboratory or fieldwork setting.

**Psychology 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 4A 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 introduction to psychology course, and one course from statistics (recommended), finite mathematics, calculus, computer science theory, or computer programming in C++.

Refer to the UCLA Transfer Admission Guide at http://www.admissions.ucla.edu/prospect/adm_tchtm for up-to-date information regarding transfer selection for admission.

After satisfying the preparation for the major requirements, students need to petition to enter the major at the Undergraduate Advising Office.

The Major

Required: (1) Five core courses, with at least two from each category and a fifth course from either category: (a) Psychology 110, 115 (or M117A, M117B, and M117C), 120A, 120B, and (b) 127A or 127B or 127C, 130 (or one course from 133A through 133i or 161), 135, 150; (2) one laboratory/fieldwork course from 101, 111, 116, 121, 126, 131, 136A, 136B, 136C, 151, 186A through 186D; (3) four additional upper division elective courses (16 units) in psychology.

Students who complete Psychology M117A, M117B, M117C receive equivalent credit for course 115 and two upper division psychology electives. All three courses must be completed to receive psychology elective credit.

Each upper division course must be taken for a letter grade (C or better) in each course and a 2.5 overall grade-point average in the preparation courses. Students must complete 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 6A; 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_tchtm 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, 133E, 135, 137G, 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, Neurosciences 102, Philosophy 124 through 136, Statistics 100A, 100B, 100C, 101B, 101C; and (4) in the junior or senior year, two capstone terms of Psychology 195B or 196B (may be fulfilled by taking any two courses from 195B or 196B or 196B/194C, provided content is approved by the Undergraduate Advising Office).

Students who complete Psychology M117A, M117B, M117C receive equivalent credit for course 115 and two upper division cognitive science electives. All three courses must be completed to receive cognitive science elective credit.

Students must have a 2.0 grade-point average in all upper division courses selected to satisfy major requirements. With the exception of Psychology 195B and 196B, each course must be taken for a letter grade.

Psychobiology B.S.
The Psychobiology major is designed for students who plan to go on to postgraduate work in physiological psychology, neuroscience, behavioral aspects of biology, or the health sciences. Psychobiology is the study of behavior from a biological perspective. It includes neural, experimental psychological, natural history, genetic, comparative/evolutionary, and developmental approaches to understanding human and animal behavior.

The requirements described below include sufficient preparation if students plan to pursue graduate work in any of the above fields; however, they may want to include additional advanced courses in psychology and related sciences as well as other types of research and fieldwork experiences. Under special circumstances, graduate-level courses can be taken by undergraduate students, although such courses may not be applied toward degree requirements for the major. For additional information, contact the Undergraduate Advising Office, 1531 Franz Hall.
Psychobiology Premajor

Students need to file a petition in the Undergraduate Advising Office to declare the Psychobiology premajor. They are then identified as Psychobiology premajors until they (1) satisfy the preparation for the major requirements and (2) file a petition to declare the Psychobiology major.

Preparation for the Major

Life Sciences Core Curriculum

Required: 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.

Also required are Psychology 10, 100A, 100B. Students cannot take Psychology 100B until they have passed course 100A with a grade of C or better. Psychology 100A and 100B should be taken early in the career; these courses are open only to students who have declared the Psychobiology 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.

Each of the preparation for the major courses must be taken for a letter grade (C or better in Psychology 10, 100A, and 100B, C- or better in the remaining courses) with a 2.0 overall grade-point average. Students must complete all preparation for the major courses by the end of the Summer Quarter of their third year to be eligible to petition to declare the Psychobiology major.

Students who repeat more than two preparation courses or any preparation course more than once are denied admission to the major.

Transfer Students

Transfer applicants to the Psychobiology major with 90 or more units must complete the following introductory courses prior to admission to UCLA: one year of general biology with laboratory for majors, preferably equivalent to Life Sciences 1 and 2, 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/admissions.xml 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 133I, 135, 150, 161; (3) 16 units of graded elective courses from the following list: Ecology and Evolutionary Biology 112, 113A, 114A (no more than one from this group), Psychology 111, 112A through 112D, M117A, M117B, M117C, M117J, 119A through 119X, 137G, 152, 160, 161, 162, 186D, 191CH (only if content is approved by the undergraduate vice chair), Chemistry and Biochemistry 153A, 153L, Computational and Systems Biology M187, Ecology and Evolutionary Biology 100, 102, 105, 106, 110, 111, 115, 117, C119A, 120, 121, 122, 124A (only 4 units may be applied toward the major), 129, 135, 164, 170, Microbiology, Immunology, and Molecular Genetics 185A, Molecular Cell and Developmental Biology 100, 104AL, 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 psychology elective credit.

Students must have a 2.0 grade-point average in all upper division courses selected to satisfy major requirements, and each must be taken for a letter grade.

Honors

Honors Courses

Each year the department offers a selection of honors courses, designated with an H suffix. The courses provide close contact with faculty members, emphasize readings in the original literature, student reports, and small group discussions, and may include field or research experience. 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 if the 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 (ADP) minor is designed to (1) provide a coherent, challenging academic program focused on investigating, understanding, and supporting the development of young 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 applied and been accepted into the program. Qualified students are admitted into one of two annual cohorts (one beginning in fall, the other in spring) to complete three consecutive terms of specialized coursework alongside a hands-on teaching internship (86 hours per term) at one of several UCLA child care centers. For further information about applying to the minor, contact the ADP academic coordinator by e-mail, ADPminort@psych.ucla.edu, or see http://www.psych.ucla.edu/undergraduate/services/majors-minors/applied-developmental-psychology-minor. 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, 143L, 161, 199A or 199B (content must be approved by the Undergraduate Advising Office), Sociology M174. One of the four additional courses must include either Psychology 130 or an upper division course from 133B through 133I.

Internship Requirement/Fieldwork Component (8 units): Psychology 134C, 134D (must be taken concurrently with course 134A), 134E (must be taken concurrently with course 134B). Students work as interns for three consecutive academic terms at one of several UCLA child care centers serving infants, toddlers, and/or...
preschool-age children. The internship provides hands-on experience working with young children and opportunities to closely observe children and teachers.

A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor.

Each minor course, except for the fieldwork component of the internship courses, must be taken for a letter grade, and students must have an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

**Cognitive Science Minor**

The Cognitive Science minor is designed to introduce students to cognitive science topics as addressed in a number of different disciplines, such as biology, computer science, engineering, linguistics, mathematics, 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 from four clusters of upper division courses that have been organized to reflect different aspects of cognitive science. Students take three courses within their primary cluster and two additional courses from the remaining clusters (secondary clusters).

The minor is open to all enrolled UCLA students, other than Cognitive Science majors, who have an overall grade-point average of 2.0 or better. Students must make an appointment with a counselor in the Undergraduate Advising Office, 1531 Franz Hall, (310) 825-2730, to enter the minor and receive counseling on how to 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 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, 119C, 119F, M119L, M119N, 137G, 160, 161; (2) computation and modeling cluster — three courses from Biomathematics 108, Computer Science 161, Psychology 186A through 186D; (3) human cognition cluster — Psychology 121 and two courses from 120A, 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, C127A, C127B, 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.

A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor.

Each minor course must be taken for a letter grade, and students must have an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

**Fieldwork and Research Opportunities**

Many research and fieldwork opportunities are open to students who wish to expand their knowledge and broaden their background in the field of psychology. These experiences can be enriching and help bring undergraduate students closer to understanding the importance of research and internships, including their applications in the everyday world. At least one of the following courses is recommended for students planning postgraduate study: Psychology 99, 185, 192, 194A through 194D, 195A, 195B, 196A, 196B, 199A, or 199B. Only 12 units from any combination of courses 185, 192, 194, 195, and 196 may be applied toward the undergraduate degree. Information about these courses and programs is available from the Undergraduate Advising Office, 1531 Franz Hall.

Only one 4-unit 199 course may be taken per term, and only 16 units of course 199 may be applied toward the degree. Only one 199 course may be taken for a letter grade (additional 199 courses may be taken on a P/NP basis). If approved in advance by the Undergraduate Advising Office, 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 (PROP) represent a vital effort to identify and mentor underrepresented minority and/or low-income students. The purpose of PROP is to encourage such students to participate in research and pursue graduate studies leading to careers in academia. The recruitment and application process for PROP takes place each Fall Quarter. Students selected to participate are awarded stipends for Winter and Spring Quarters; during which time, they do research under the mentorship of a psychology faculty member. In addition, students are required to attend weekly seminars covering such topics as graduate school, careers in academia, and research opportunities in various fields of psychology. Prior research experience is not required. This is an excellent opportunity for students to begin their research careers and acquire the needed experience to pursue advanced studies.

**Infant Development Program**

The Megan E. Daly Infant Development Program (IDP), established in May 1983, is designed as a teaching and research facility for the department and is set up to accommodate both cross-sectional and longitudinal investigation of infants, toddlers, their families, and caregivers. In addition, the program provides an opportunity for undergraduate students in developmental psychology and other areas to acquire firsthand experience working with infants and toddlers on an individual basis or in a group setting. The program has two primary functions: (1) to offer quality group care for infants and toddlers of the students, staff, and faculty of the Psychology Department and other UCLA departments and (2) to serve as a teaching and research facility for the Psychology Department and the UCLA community. The program has two locations (1611 Franz Hall and Fernald Center at 320 Young Drive North) and accommodates children from three months to three years old. Students in the Applied Developmental Psychology minor may complete their fieldwork at one of the IDP locations.

**UCLA Psychology Clinic**

The UCLA Psychology Clinic in the Department of Psychology is a major training center for students in the clinical psychology 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://grad.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 Psychology offers Master of Arts (M.A.), Candidate in Philosophy (C.Phil.), and Doctor of Philosophy (Ph.D.) degrees in Psychology.
Psychology

Lower Division Courses

10. Introductory Psychology. (4) Lecture, four hours. General introduction including topics in cognitive, experimental, personality, developmental, social, and clinical psychology; six hours of psychological research and a grade of C or better required of all departmental premajors. P/NP or letter grading.


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. Many examples from visual information processing.


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 concepts, with their application to research and practice in various areas of psychology. Letter grading.

100B. Research Methods in Psychology. (4) 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 broad range of basic and applied research issues. P/NP or letter grading.

101. General Psychology Laboratory. (4) Lecture, one hour; laboratory, three hours. Requisites: courses 10, 100A, 100B. General laboratory course for psychology students to 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, 100B. Behavioral analysis of learning on animal and human conditioning; repetition and transfer of training; relation of learning and motivation. Intended to provide empirical basis for theory and research in this area. P/NP or letter grading.

111. Learning Theory. (4) Lecture, two hours; laboratory, three hours. Requisites: courses 10, 100A, 100B, 110. Designed for departmental majors. Laboratory experience with techniques in study of learning, especially with conditioned reflexes. (Same as Molecular, Cell, and Developmental Biology M101B or Psychological Science M180A.) Neurosciencemajors must have grade of C– or better required to proceed to Neuroscience M101B or Physiological Science M180A. Requisites: course 115 or M117A (or Molecular, Cell, and Developmental Biology M101A or Psychological Science M101A or Physiological Science M101B). Intensive analysis in seminar 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.

112A. Basic Processes of Motivated Behavior. (4) Lecture, 90 minutes; discussion, 90 minutes. Requisites: courses 10, 100A, 110. Designed for juniors/seniors. Examination of some basic processes underlying motivated behavior. Emphasis on experimental determinants of behaviors such as feeding, drinking, and reproduction-related behavior. Discussion of physiological mechanisms that contribute to such behaviors. Consideration of topics such as reinforcement, 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; lectures 100A, 100B, 110, 110. Recommended: course 115. Designed for juniors/seniors. Presentation of biological and behavioral approaches to understanding the neurobiological bases of fear and anxiety. Requisites: course 115 or Molecular, Cell, and Developmental Biology M101A or Psychological Science M101A or Psychological Science M101B. Not open to nonmajors. Examination of some basic processes underlying motivated behavior. Emphasis on experimental determinants of behaviors such as feeding, drinking, and reproduction-related behavior. Discussion of physiological mechanisms that contribute to such behaviors. Consideration of topics such as reinforcement, acquired motivation, and drug addiction. Evaluation of evidence obtained in laboratory studies conducted with animals. P/NP or letter grading.

112C. Psychobiology of Anxiety and Depression. (4) Lecture, two and one-half hours; discussion, 90 minutes. Requisites: courses 110 and 115, or Neuroscience M101A, M101B, and M101C. Limited to juniors/seniors. Presentation of biological and behavioral approaches to anxiety and depression. Many topics focus on interaction of genes with environment and development of stress responses and disease states. Consideration of topics such as stressors, acquired motivation, and drug addiction. Examination of concordance and discordance between results from laboratory and applied research. P/NP or letter grading.


116. Behavioral Neuroscience Laboratory. (4) Lecture, one hour; laboratory, three hours. Requisites: courses 110, 110A, 111, 111B. Designed for Psychology and Psychology majors. Laboratory experience with various topics in behavioral neuroscience. P/NP or letter grading.


M117A. Cellular and Systems Neuroscience. (5) Lecture, four hours; discussion, 90 minutes. Requisites: Chemistry 14C or 30A (14C may be taken concurrently), Life Sciences 2, Physics 1B or 1BH or 6B or 6BH. Not open for credit to students with credit for Physiological Science 111A. For Neuroscience and Physiological Science majors, grade of C– or better is required to proceed to Neuroscience M101B or Physiological Science 111B. Not open for credit to students with credit for Molecular Neurosciences, M101C, or Molecular Neurosciences, M180A. Enforced requisite: course 115. Designed for juniors/seniors. Survey of genetic, evolutionary, and experiential factors affecting behavior. Using a comparative approach where appropriate, emphasis on relevance of biological mechanisms to understanding of humans and their interaction with their environment. P/NP or letter grading.

M117B. Molecular Neurosciences. (5) Lecture, four hours; discussion, 90 minutes. Requisites: course 115 or M117A (or Molecular, Cell, and Developmental Biology M101A or Psychological Science M101A or Physiological Science M180A; Neuroscience majors must have grade of C– or better) or Physiological Science 111A. Not open for credit to students with credit for Molecular Neurosciences, M117A. Neurosciences majors must consider the relation of these processes to mental disorders. 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 Biology M101A or Psychological Science M101A or Physiological Science M180A; Neuroscience majors must have grade of C– or better) or Physiological Science 111A. Not open for credit to students with credit for Molecular Neurosciences, M117A. Neurosciences majors must consider the relation of these processes to mental disorders. P/NP or letter grading.
anisms of perception, response selection, motor pattern generation, learning, and motivation, with emphasis on operation of these processes in well-defined neural circuits in animals and humans. P/NP or letter grading.

119G. Brain, Mind, and Motion Pictures. (4) Lecture, 90 minutes; screenings/discussion, two and one half hours. Requisites: course 115. Limited to juniors/seniors. Exploration of cognitive neuroscience of film from three perspectives: how advanced brain research is represented in films of period, how modern cognitive neuroscience explains experience of watching movies, and neuropsychology of acting in movies. P/NP or letter grading.

M119L. Human Neuropsychology. (4) Same as Neuroscience M119L.) Lecture, three hours, Recommended requisites: courses 115 (or M117A and M117C), 120A or 120B. Designed for juniors/seniors. Survey of experimental and clinical human neuropsychology; neural basis of higher cognitive functions. P/NP or letter grading.


M119N. Visual System. (4) (Same as Neuroscience M119N.) Lecture, three hours. Requisite: course 115 or Neuroscience M119L. Survey of the visual system. Science 111A. Ability to image and analyze visual world is truly remarkable feat. Coverage of anatomy and physiology of visual processing from retina to visual cortex through lectures, extensive reading, and discussions. P/NP or letter grading.

M119O. Psychology of Aging. (4) (Same as Gerontology M119O.) Lecture. Course 115. Designed for juniors/seniors. Aging refers to developmental changes that occur over the stages of life. Some alterations that occur represent improvement, others are detrimental. Examination of impact of aging process on mental phenomena and exploration of ways in which positive changes can be maximally utilized and impact of detrimental alterations minimized. P/NP or letter grading.

119P. Mapping Mind through Its Molecules. (4) Lecture, four hours. Requisite: course 15 or 115. Designed for juniors/seniors. Exploration of how neural molecules provide unique window into mind. Topics include neurotransmitters, receptors, ion channels, and signal families. Roles these molecules play in information processing, consciousness, learning, memory, neural plasticity, degeneration, and psychiatric disorders. P/NP or letter grading.

119Q. Psychology of Sleep and Dreams. (4) 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.


119T. Psychobiology of Sex and Aging. (4) Lecture, three hours. Requisite: course 115. Sexuality in aging focused on both biological and psychological perspectives. Topics include physical and cognitive changes in aging that affect sexual response, with emphasis on differences between females and males concerning aging-related changes, emotional well-being, and human sexual response. P/NP or letter grading.

120A. Cognitive Psychology. (4) Lecture, three hours; discussion, one hour. Requisites: courses 10, 100A. Designed for juniors/seniors. Survey of cognitive psychology; how people acquire, represent, transform, and use verbal and nonverbal information. Perception, attention, imagery, memory, representation of knowledge, language, action, decision making, thinking. P/NP or letter grading.

120B. Sensation and Perception. (4) Lecture, three hours; discussion, one hour. Requisites: courses 10, 100A. Designed for juniors/seniors. Acquisition of information about physical and basic sensation, biophysical mechanisms and perceptual processes. Perception of objects, surfaces, space, motion, and events. Connections between information, computations, and biophysical mechanisms in vision, audition, and other systems. P/NP or letter grading.

121. Laboratory in Cognitive Psychology. (4) Laboratory, four hours. Requisites: courses 100, 100B, 120A or 120B. Designed for Psychology and Cognitive Science majors. Laboratory experience with methods and phenomena from research on human perception, memory, and cognition. P/NP or letter grading.

124A. Advanced Topics in Sensation and Perception. (4) Lecture, three hours; discussion, one hour. Requisites: courses 100, 100A, 120A or 120B. Designed for juniors/seniors. Contemporary research and theory about visual and auditory perception. Topics include physiological mechanisms, psychophysical studies and models, and computational approaches. P/NP or letter grading.

124B. Visual Information Processing. (4) Lecture, two hours; discussion, one hour. Requisites: courses 10, 100A or 120B. Exploration of stimuli and visual representation of visual information in memory, pattern recognition, nature and role of attention in visual processing, word and picture recognition, concept and imagery. Possible consideration of developmental aspects. P/NP or letter grading.

124C. Human Memory. (4) Lecture, two hours; discussion, one hour. Requisite: course 120A or 120B. Designed for juniors/seniors. 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. (4) Designed for Psychology majors. Investigation into laboratory-based methods and principles of human performance. Major topics include research methods for human performance, central control of movements, anticipation and timing, automatically, sensory involvement in speed-accuracy trade-offs, and individual differences and abilities. Principles discussed should have relevance for numerous real-world situations in which complex performance are required, such as in industrial or occupational settings, musical performances, vehicle control, and sport.

124E. Language and Cognition. (4) Lecture, three hours. Requisites: courses 10 and 120A or 120B. Designed for juniors/seniors. Recent theories of language and cognition; nature of categories, feedback, and error detection in language and cognition; modularity; ambiguity; knowledge acquisition; processes and representations of underlying perception, production, attention, and awareness in language and cognition. P/NP or letter grading.

124F. Thinking. (4) Lecture, three hours. Requisites: course 120A or 120B. Analysis of experimental studies relating to human categorization, decision making, problem solving, creativity, and related topics. P/NP or letter grading.

124G. Cognitive Aging. (4) Lecture, 90 minutes; discussion, 90 minutes. Requisites: courses 10, 100A, 120A or 120B. Designed for juniors/seniors. Recent facts and theories on relations between normal aging and cognition, including perception, language comprehension, learning, memory, thinking, inhibitory processes, decision making, senescence, general slowing phenomenon, and related neuropsychological issues. P/NP or letter grading.

124L. Cognitive Neuroscience of Memory. (4) Lecture, three hours, Requisites: courses 85 or 120A, and 115. Designed for juniors/seniors. Introduction to neural basis of learning and memory. Topics include cellular and molecular mechanisms of learning and memory, human amnesia and hippocampus, working memory and prefrontal cortex, procedural learning, emotional memory systems, and memory consolidation. P/NP or letter grading.

124J. Perception, Learning, and Learning Technologies. (4) Lecture, three hours; fieldwork, seven hours. Requisites: courses 120A or 120B. Aspects of perception and cognition as they relate to learning and potential for learning technology. Basic knowledge about visual information processing, perception, perceptual learning, knowledge representation, pattern recognition, attention, 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. (4) Seminar, three hours; fieldwork, seven hours. Research approaches utilized by psychologists in Fernald Research Intern Program to conduct research in developmental psychopathology in context of direct experience. Interns provided with necessary background to undertake various research activities during Winter and Spring Quarters. P/NP grading.

125B. Research Methods in Developmental Psychopathology. (4) Laboratory, three hours; fieldwork, seven hours. Limited to departmental majors. Recent research approaches utilized by psychologists to conduct research in developmental psychopathology. Letter grading.

125C. Advanced Research Methods in Developmental Psychopathology. (4) Laboratory, three hours; fieldwork, seven hours. Limited to departmental majors. Advanced research approaches utilized by psychologists to conduct research in developmental psychopathology. Letter grading.

126. Clinical Psychology Laboratory. (4) Laboratory, four hours. Requisites: courses 100, 100B, and 127A or 127B or 27C. 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, psychopharmacological methods, observational methods with couples and families. Letter grading.

127A. Abnormal Psychology. (4) (Formerly numbered 127.) Lecture, three hours. Requisite: course 10. Not open for credit to students with credit for courses 120A, 127C, or former course 127 or 127D. Survey of the psychobiological substrates of abnormal cognition, behavior, and
mood, with particular focus on neuroscience, genetics, physiology, and anatomy of clinical disorders such as schizophrenia, bipolar disorder, major depression, and substance disorders. P/NP or letter grading.

127C. Abnormal Psychology: Developmental Perspectives. (4) Lecture, three hours, requisite: course 10. Not open to students with credit for course 127A, 127B, or former course 127 or 128. Study of abnormal child development from infancy through adolescence and early adulthood. Clinical dispositions, 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. Requisites: 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 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.

129B. Introduction to Psychoanalysis. (4) Lecture, three hours. Requisites: courses 10, 100A. Exploration of different origins and psychological aspects of the environment, ecological and cultural role of perception, learning, and motivation in personality. P/NP or letter grading.

129C. Culture and Mental Health. (4) Lecture, two hours; discussion, one hour. Requisites: courses 10, 100A. Survey of child and adolescent psychopathology and psychotherapy from a developmental perspective. Coverage includes such conditions as anxiety disorders, depression, conduct and attention problems, eating disorders, and autism, with information on prevalence, causes, comorbid treatments and their effects. P/NP or letter grading.

130. Developmental Psychology. (4) Lecture, three hours; discussion, one hour. Requisites: courses 10, 100A. Development for seniors/juniors. 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, one hour; laboratory, three hours. Requisites: courses 10, 100A, 100B, and 130 or one course from 133A through 133I. Designed for Psychology and related majors. Forms of scientific writing; ethics of research, especially with minors; 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, to be announced. Enrollment limited to juniors/seniors. Policies, models, and mechanisms for mental health in schools. Psychopathology placed into broader perspective of normal development and psychosocial problems, more refined theoretical, practical, and ethical issues. P/NP or letter grading.

133A. Adolescent Development. (4) Lecture, three hours. Requisites: courses 10, 100A. Examination of cognitive, social, physical, and physiological development of the adolescent. P/NP or letter grading.

133B. Cognitive Development. (4) Lecture, three hours. Requisites: courses 10, 100A. Major theories, approaches, and issues in study of cognitive development. Readings include original research on important topics about initial perceptual capacities, and some sensory foundations. P/NP or letter grading.

133C. Social and Personal Development. (4) Lecture, three hours. Requisites: courses 10, 100A. Theory and research on social and personal development during childhood. Topics include parent/child attachment, temperament, aggression, sex-typing, self-concept, moral reasoning and behavior, social status and social skills, and peer group relations. P/NP or letter grading.

133D. Language Development. (4) Lecture, three hours. Requisites: 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.

133E. Perceptual Development. (4) Lecture, three hours. Requisites: courses 10, 100A. Topics include origins and development of human perceptual abilities, origins of knowledge about functionally important aspects of the environment, ecological and cultural role of perception, learning, and motivation in personality. P/NP or letter grading.

133F. Psychology and Education. (4) Lecture, three hours. Requisites: courses 10, 100A. Application of principles of cognitive development, learning, and perception to educational problems. Topics include general instructional issues, psycholgy of reading and writing, 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. Requisites: 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. Requisites: courses 10, 100A. Application of developmental psychology to support and illustrate, in applied setting, theories and research findings presented in lecture. P/NP or letter grading.

133I. Fieldwork in Applied Developmental Psychology. (2) Fieldwork, 86 hours per term. Enforced corequisite: course 134A. Designed for Applied Developmental Psychology minors. Fieldwork in application of developmental psychology to support and illustrate, in applied setting, theories and research findings presented in lecture. P/NP or letter grading.

134A. Applied Developmental Psychology. Pre-school/School-Age Care and Education. (4) Lecture, three hours. Designed for 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.

134B. Advanced Applied Developmental Psychology. (4) Seminar, one hour; fieldwork, eight hours. Requisites: courses 134A through 133I. Designed for Applied Developmental Psychology minors. Continuation of fieldwork in advanced applications of developmental psychology to support and illustrate, in applied setting, theories and research findings presented in lecture. P/NP or letter grading.

134C. Fieldwork in Applied Developmental Psychology. (2) Fieldwork, 86 hours per term. Enforced corequisite: course 134B. Designed for Applied Developmental Psychology minors. Fieldwork in application of developmental psychology to support and illustrate, in applied setting, theories and research findings presented in lecture. P/NP or letter grading.

134D. Early Childhood Curriculum. (4) Lecture, three hours. Requisites: course 10, one course from 130 or 133B through 133I, one statistics course. Examinaton of methods, materials, and philosophies that enhance development of children in context of childcare settings. Topics include issues of multiculturalism, antisocial curriculum, and special needs adaptations. P/NP or letter grading.

134E. Child, Family, and Community. (4) Lecture, three hours. Requisites: course 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.

134F. Social Psychology. (4) Lecture, three hours; discussion, one hour. Requisites: courses 10, 100A. Designed for juniors/seniors. Interrelationships between the individual and his social environment. Social influences on motivation, perception, and behavior. Development and change of attitudes and opinions. Psychological analysis of small groups, social stratification, and mass phenomena. P/NP or letter grading.

135A. Fieldwork in Social Psychology. (2) Fieldwork, 86 hours per term. Designed for Psychology majors. Introduction to research design and methods used to test social psychological hypothesis, including experiments, observation, content analysis, and/or questionnaires. P/NP or letter grading.

135B. Nonexperimental Methods in Social Psychology. (4) Lecture, two hours; laboratory, two hours. Enforced pre/corequisite: course 135A. Designed for Psychology majors. Research experience with nonexperimental methods for study of social attitudes or behavior, including fieldwork with survey methods, naturalistic observation, or questionnaires. P/NP or letter grading.

136A. Social Psychology Laboratory. (4) Lecture, one hour; laboratory, four hours. Requisites: courses 10, 100A, 100B, 135. Designed for Psychology majors. 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.

136B. Social Psychology Laboratory. (4) Lecture, two hours; laboratory, two hours. Enforced pre/corequisite: course 136A. Designed for Psychology majors. Research experience with nonexperimental methods for study of social attitudes or behavior, including fieldwork with survey methods, naturalistic observation, or questionnaires. P/NP or letter grading.

136C. Survey Methods in Psychology. (4) Lecture, two hours; laboratory, three hours. Requisites: courses 10, 100A, 100B, 135. Designed for Psychology majors. Survey research in psychology, with particular
emphasize surveys of social and political attitudes. Actual experience in systematic survey research such as that done by agencies of government, market re-
search companies, and academic survey research centers. Topics include survey design, sampling, in-
terviewing techniques, response rates, questionnaire
design, data coding, and analysis. Training in tele-
phone interviewing techniques in laboratories. P/NP or letter grading.

137A. Sport Psychology. (4) Lecture, three hours. Designed for junior/senior Psychology majors. Intro-
duction to field of sport psychology. Coverage of how
social scientists think about, study, and treat intimate
relationships in everyday life, social power of political figures.
Examination of the powerholder and target of influence and
resistance to such influence, and on bases of
ethics and/or global epidemic. Examination of material
origins as new, rare, and obscure condition in early
development and for locating and characterizing genes im-
fluences on aging to prepare students for subsequent
specialization. P/NP or letter grading.

142H. Advanced Statistical Methods in Psychol-
ogy (Honors). (4) Lecture, three hours; laboratory, two hours. Requisites: courses 100A, 100B. Survey of sta-
tistical techniques commonly used in psychology, edu-
cation, and behavioral and social sciences: correla-
tional techniques, analysis variance, and multiple re-
gression. P/NP or letter grading.

141A. Measurement and Its Applications. (4) (Same as M154.) Lecture, three hours. Requi-
tes: one course from 100A, 100B, 101A, 112, 13, or 14. Selected theories for quantification of psycho-
logical concepts and research. Examples and projects from
behavioral science data. Classical test, factor analysis, generalizabil-
ity, item response, optimal scaling, cardinal measurement,
computer-adaptive, and related theories. Construc-
tion of tests and measures and their validity, reliability, and
bias. Principles, applications, and research focuses.

141TA. Psychology of Lesbian Experience. (4) (Same as Gender Studies M147A and Lesbian, Gay,
Bisexual, and Transgender Studies M147A.) Lecture, two
hours; discussion, one hour. Requisite: course 10 or Gender Stud-
es 10. Designed for seniors. Examination of work be-
havior of women and men. Topics include anteced-
ents of career choice, job findings, leadership, perform-
ance evaluation, and evaluation and evaluation,
employment, and interdependence of work and
family roles. P/NP or letter grading.

137F. Introduction to Sport Psychology. (4) Le-
tecture, three hours. Designed for juniors/seniors. Survey of topics in sport psychology, including leadership and
team dynamics, moral development and aggres-
sion, personality, motivation, fan behavior, and perfor-
mance enhancement. Consideration of youth sport through
writing and discussion. P/NP or letter grading.

137G. Social Cognitive Neuroscience. (4) Lecture, three
hours. Principles of social cognitive neurosci-
eence (SCN) and survey of broad array of topics in
een science. SCN is fundamental merging of social science
questions with neuroscience techniques, with particular emphasis on functional magnetic resonance imaging (fMRI). P/NP or letter grading.

137I. Interpersonal Influence and Social Power. (4) Le-
tecture, three hours. Requisite: course 135. Theory and
research focusing on how people influence one
other 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 relationships in the family, interpersonal influ-
ce in everyday life, social power of political figures,
and psychological analysis of public opinion on these
issues. 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 processes, attitudes, behav-
ioral, social, and political aspects of race,
emotions and politics, racial conflict, and psy-
chological analysis of public opinion on these
issues. M139. Perspectives on Autism and Neurodv-
osity. (4) (Same as Disability Studies M139.) Seminar, three
or four hours; discussion, one hour. Examination of autism as diagnostic
category and cultural phenomenon from its histori-
cal roots as new, rare, and obscure condition in early
1940s to its current contested status as minority iden-
tity and/or change. Examination of material
sourced from various fields and disciplines invested in
autism, including psychology, neuroscience, arts and
humanities, popular media, anthropology, activism,
and activism, and critical autism studies. Students encounter and
analyze multiple perspectives on autism and put them in conversation with one another. Attention paid to
way people on spectrum define, explain, and repre-
sent their own experiences of autism and discussion of
ways of making meaning of autism in context of autism intervention strategy and disability policy today. Letter grading.

140A. 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 range of in-
fluences on aging and strategies for subsequent specialization. P/NP or letter grading.

1417. Counseling Relationships. (4) Lecture, two
hours. Designed for seniors. Examination of the
processes of counseling, including counseling
theory and practice, and the role of the counselor
in the counseling relationship. P/NP or letter grading.

142. Behavior and Brain Development. (4) Lecture,
two hours. Requisites: courses 10, 100A, 100B. Limited to
juniors/seniors. Exploration of relationship between
brain development and behavior. Examination of how cognitive neuroscience can inform study of develop-
ment and how developmental approach can advance
progress in cognitive and developmental sciences.
P/NP or letter grading.

161. Behavior and Brain Development. (4) Lecture,
two 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 develop-
ment and how developmental approach can advance
progress in cognitive and developmental sciences.
P/NP or letter grading.

179B. Biomedical and Psychosocial Aspects of AIDS/HIV. (4) Lecture, three hours. Requisite: course 150 or 150A or 150B. Understanding the impact of AIDS on one's life and the lives of others. Basic models of coping with HIV infection and AIDS. Presentation of biologic, behavioral, and therapeutic interventions.

M180. Contemporary Problems in Developmental Disabilities. (4) (Same as Psychiatry M180.) Seminar, one hour. 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.


184A-184B. Psychology Research Opportunity Program Seminars. (2-2) Seminar, 90 minutes. Designed to bring together Psychology Research Opportunity Program (PROP) students undertaking supervised tutorial research in seminar setting with one or more faculty members to discuss their own work or related work in discipline. Led by one supervising faculty member. P/NP grading.

185. Research Practicum in Psychology. (3) Laboratory, seven hours. Corequisite: course C194D. Limited to juniors/seniors. Practical applications of psychological principles, 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 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 cognitively oriented psychology 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, 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.


186C. Cognitive Science Laboratory: Psychophysical Theories and Methods. (4) Lecture, two hours; laboratory, two hours. Requisites: courses 10, 85, 100A, 100B. Designed for junior/senior departmental majors. Laboratory experience in examining psychophysical measurement procedures (psychophysical methods) and cognitive processing and decision models on which procedures are based, with particular emphasis on clinical detection theory and its applications. Letter grading.

186D. Laboratory in Functional Neuroimaging. (4) Laboratory, four hours. Enforced requisites: courses 10, 100A, 100B. Limited to departmental majors. Introduction to study of brain with functional resonance imaging (fMRI). All major aspects to be discussed, from physical basis of MR signal to data analysis. Letter grading.

187A. Psychology and Law. (4) Lecture, two hours; discussion, two hours. Designed for juniors/seniors. Study of new topics on legal psychology, including suspect identification, witness reports, and police procedures. Outside speakers utilized in presentation of these materials. Students participate in presentations and/or discussions.

187B. Advanced Psychology and Law. (4) Lecture, three hours; discussion, one hour. Requisite: course 187A. Examination of various ethical and legal aspects of legal psychology, including civil commitment, the insanity defense, the death penalty, and the forensic evaluation of competency.

188A. Special Seminars: Psychology. (4) Seminar, three hours. Limited to juniors/seniors. Discussion of research methods, applications, and current literature through group discussion, presentation, and reading. Research methods 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.

188B. Special Courses in Psychology. (4) Lecture, three hours. Designed for junior/senior majors. Departmentally sponsored experimental or temporary seminars on selected topics in psychology, such as those taught by visiting faculty members. Reading, discussion, and development of culminating project may be required. For credit, P/NP or letter grading.

188C. Special Topics in Psychology. (4) Seminar, one hour. Designed to bring together students undertaking supervised tutorial research in seminar setting with one or more faculty members to discuss their own work or related work in discipline. Led by one supervising faculty member. 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 culminating project may be required. May be repeated for credit. P/NP grading.

191AH-191BH-191CH. Departmental Honors Research Seminars. (2-2-2) Seminar, two hours. Enforced corequisite: course 192. Course 191AH is requisite to 191BH, which is requisite to 191CH. Limited to psychology honors program students. Opportunity for development and analysis of creative ideas through independent 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. Courses 191CH and 192 may be applied toward elective course requirement for any Psychology Department major. Letter grading.

192. Education Practices in Psychology. (4) Seminar, three hours. Limited to juniors/seniors. Training seminar for psychology departmental major, designed to assist undergraduate students to assist in courses related to psychology. Students assist in preparation of materials and development of innovative programs under guidance of faculty members and teaching assistants. Only 12 units from any combination of courses 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.

193. Journal Club Seminars: Psychology. (1) Seminar, one hour. Limited to juniors/seniors. Discussion of readings selected from current literature of particular field or attendance at and write-ups 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 reading. Research methods 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/seniors who are part of research group. 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. P/NP grading.

194C. Research Group Seminars: Cognitive Science. (1) Seminar, one hour. Corequisite: course 196B (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 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.

C194D. Research Group Seminars: Practicum. (1) (Formerly numbered C194D.) Seminar, one hour. Corequisite: course 195. Designed for undergraduate 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 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) Internships approved by Psychology Department. Corequisite: course 194A. Limited to juniors/seniors. Internship in applications of psychology in supervised setting in community agency or business. Students meet with cooperating sponsor and provide periodic reports of their experience. Only 12 units from any combination of courses 192, 194, 195, and 196 may be applied toward undergraduate degree. May not be applied toward course requirements for any Psychology Department major. Individual con-
tract with supervising placement sponsor required. Information and contracts may be obtained from Undergraduate Advising Office, 1531 Franz Hall. P/NP grading.

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 experientially oriented 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 requirements for Cognitive Science major. Individual contract with supervisor required. Information and contracts may be obtained from Undergraduate Advising Office, 1531 Franz Hall. P/NP grading.

196A. Research Apprenticeship in Psychology. (3 to 4) Tutorial, eight hours. Corequisite: course 194B. Limited to juniors/seniors. Practical applications of research project under direct supervision 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 any Psychology Department major. Individual contract required. Information and contracts may be obtained from Undergraduate Advising Office, 1531 Franz Hall. P/NP grading.

196B. Research Apprenticeship in Cognitive Science. (3 to 4) Tutorial, eight hours. Corequisite: course 194C. Limited to junior/senior Cognitive Science majors. Practical applications of cognitive 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.


205E. Psychotherapy. (2) Lecture, three hours. Designed for graduate students. Overview of theories of psychotherapy, including behavior therapy and dynamic therapies. S/U or letter grading.

205F. Psychological Assessment. (2) Lecture, three hours. Designed for graduate students. Major assessment techniques, personality instruments, and personality assessment. Letter grading.

205G. Psychological Testing. (2) Lecture, three hours. Designed for graduate students. Techniques of psychological testing, including intelligence tests, achievement tests, aptitude tests, and personality tests. Letter grading.

205H. Research Methods in Psychology. (2) Lecture, three hours. Designed for graduate students. Critical evaluation of research designs and methods, with emphasis on design, data analysis, and interpretation. S/U or letter grading.


205J. Animal Behavior. (4) Lecture, four hours. Topics include evolutionary, ecological, and ethological aspects of animal behavior. S/U or letter grading.

205K. Psychophysiology. (2) Lecture, three hours. Designed for graduate students. Techniques for the study of physiological responses to psychological stimuli. Topics include neurophysiological and psychophysical methods. Letter grading.

205L. Psychological Assessment and Diagnosis. (2) Lecture, three hours. Designed for graduate students. Advanced techniques for the assessment and diagnosis of psychological disorders. Letter grading.

205M. Neuropsychological Assessment. (4) Lecture, four hours. Designed for graduate students. Advanced techniques for the assessment of neurological function and dysfunction. Topics include neuroimaging, electrophysiological techniques, and cognitive assessment. Letter grading.

205N. Neuropsychological Assessment and Diagnosis. (4) Lecture, four hours. Designed for graduate students. Advanced techniques for the assessment and diagnosis of neurological disorders. Topics include neuroimaging, electrophysiological techniques, and cognitive assessment. Letter grading.

205O. Neuropsychological Assessment and Diagnosis. (4) Lecture, four hours. Designed for graduate students. Advanced techniques for the assessment and diagnosis of neurological disorders. Topics include neuroimaging, electrophysiological techniques, and cognitive assessment. Letter grading.

205P. Neuropsychological Assessment and Diagnosis. (4) Lecture, four hours. Designed for graduate students. Advanced techniques for the assessment and diagnosis of neurological disorders. Topics include neuroimaging, electrophysiological techniques, and cognitive assessment. Letter grading.
215A. Health Psychology. (4) Lecture, three hours. Preparation: undergraduate degree or training in psychology. Psychological and social factors involved in etiology of illness, treatment and course of illness, long-term effects, adjustment of chronically ill or disabled, and practice of institutional healthcare and self-care. Letter grading.

215B. Human Physiology in Social and Behavioral Science. (4) Lecture, three hours. Limited to graduate students. Designed to provide students with understanding of basic anatomy and activities of biological systems that relate psychological factors to health, and interconnections between these systems. Letter grading.

216A. Psychology of Chronic Disease. (4) Seminar, three hours. Limited to graduate students. Major themes include conceptualization and operationalization of adjustment to chronic illness: theoretical framework for understanding determinants of adjustment to chronic illness and current research on those determinants, prevalence of psychological disorders in populations with chronic illness, evidence-based psychological interventions for individuals with chronic illness, and terminal illness and end-of-life care. Readings and discussion across several major chronic diseases (e.g., cardiovascular diseases, cancer, AIDS, Alzheimer's disease, etc.). Letter grading.

216B. Psychoneuroimmunology. (4) Seminar, three hours. Limited to graduate students. Introduction to field of psychoneuroimmunology to help students develop theoretical and methodological skills necessary for interpreting research in this area. Letter grading.

216C. Psychology of Women's Health. (4) Seminar, three hours. Limited to graduate students. Examination of theoretical and empirical advances in psychology of women's health. Focus on socioenvironmental context of women's health, stress and depression in women, psychological aspects of gynecological health, major causes of morbidity and mortality for women, and women's health-related behaviors. Letter grading.

216D. Psychology of Aging and Health. (4) Seminar, three hours. Limited to graduate students. Theories and methods in study of aging and adult development, age-related changes in biological systems, and psychological aspects of aging. Topics include physical and cognitive changes with age, mental and physical well-being in older adulthood, and socioemotional functioning of aging. Letter grading.

216E. Family, Emotions, and Health. (4) Seminar, three hours. Limited to graduate students. Discussion of theory and research on biological, emotional, social, and behavioral processes that link childhood family experiences to long-term mental and physical health. Letter grading.

216F. Community Psychology. (4) Seminar, three hours. Limited to graduate students. Social problems focus, with discussion of both conceptual and methodological issues that arise when designing and evaluating community interventions. Issues related to conceptualization of social problems as opposed to problems of individuals, and presentation of multilevel models, functional and interlocking models for several social problems. Special attention to ethnic and socioeconomic health disparities and to methodological issues faced in conducting research on these issues. Letter grading.

216G. Biology of Chronic Disease. (4) Seminar, three hours. Limited to graduate students. Examination of basic epidemiology and biology of major chronic diseases (e.g., cardiovascular disease, cancer, diabetes, chronic pain) and consideration of practical and logistical issues involved in studying chronic disease populations in behavioral and population research. S/U or letter grading.

217. Variable Topics in Health Psychology. (4) Seminar, three hours. Topics vary by instructor within health psychology area of study and may include epigenetics, child health psychology, health behavior, and behavior change. May be repeated for credit. S/U or letter grading.

218. Research Methods in Health Psychology. (4) Seminar, three hours. Designed for graduate psychology students who wish to conduct research in health psychology. Graduate students to study various research designs and methods, measurement issues, responsible conduct of research, and related issues that are found in research in health psychology. S/U or letter grading.

220A. Psychology of Chronic Disease. (4) Lecture, three hours. Designed for graduate psychology students. Intensive consideration of concepts, theories, and major problems in social psychology.

220B. Research Methods in 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 220A. Critical review of theory and research on interpersonal relations, with emphasis on friendship, dating, and marriage.

222B. Interpersonal Influence and Social Power. (4) Seminar, three hours. Preparation: advanced social psychological course (psychological or sociological). Review of theory and research on interpersonal influence and social power, applications with various power relationships such as supervisor/subordinate, healthcare professional/patient, doctor/nurse, parent/child, wife/husband, 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 consideration of major theoretical and methodological issues within domain of intergroup relations research. Approaches not simply restricted to social psychology but also to social psychology and sociological research in fields of organizational behavior, comparative politics, public opinion. S/U or letter grading.

222D. Social Stigma. (4) Seminar, three hours. Introduction to classic and contemporary theory and research on social psychology of stigma, primarily from perspective of stigmatized. Letter grading.


225. Seminar: Critical Problems in Social Psychology. (4) Seminar, three hours. Requisites: courses 210A, 220B. May be repeated for credit with consent of instructor. Discussion of social psychological approaches to relationship science in fields of anthropology, education, psychology, and sociology. Focus on issues of concern to students interested in research in the social psychology of race and ethnicity, and in interpersonal and intergroup interactions. S/U or letter grading.

226A-226B-226C. Current Literature in Social Psychology. (2-2-2) Discussion, 90 minutes. Course 226A is limited to first-year social psychology students. Courses 226B and 226C are open to nonsocial psychology students with consent of instructor. Recent and current research papers in social psychology presented by members of seminar and their significance and methodology discussed and criticized in class.

M228A. Seminar: Political Psychology. (4) (Same as History M236A and Political Science M261A.) Seminar, three hours. Introduction to political psychology, psychobiography, personality and political decision-making, group conflict, political communication, and elite decision making.

M228B. Seminar: Political Psychology. (4) (Same as Political Science M261D.) Discussion, three hours. Requisite: course 220A or Political Science M261A. Examination of social psychological processes of 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. Requisite: course 220A or Political Science M261A. Examination of social psychological processes of political socialization, racial conflict, mass political movements, and public opinion. S/U or letter grading.

229. Social Cognition. (4) Lecture, one hour; discussion, two hours. Social cognition is concerned with how people organize and interpret social information in their environment. Seminar provides broad background in the field and also gives depth and focus on particular research topics in the field. Weekly papers, as well as a lengthy final paper, required.

231. Psychology of Gender. (4) Seminar, three hours. Preparation: one year of gender/women's studies. Critical evaluation of current research and theory concerning psychology of gender, drawing on work from various areas of psychology to understand gender across different domains and its consequences for human behavior and social interaction.

232. Human Sexuality. (4) Lecture, three hours. Designed for graduate students. Intended to teach students how to carry out research on human sexual behavior. Content includes life course development, physiological and endocrinological implications, radiomunuosay (measuring hormones in blood sample), ethical issues, methodological and statistical considerations of sexual arousal, fantasy, and sexual dysfunction therapy. Discussion-oriented, with emphasis on operationalizing predictions concerning human sexual functioning.

233. Seminar: Environmental Psychology. (4) Requisites: courses 235, 250A, 250B. Critical review of work in environmental psychology designed to identify basic dimensions for analysis of man/environment relationships. Use of human emotional responses to environments as intervening variables linking specific stimulus qualities to a variety of approach-avoidance behaviors. Individual differences and drug-induced states as these relate to the dimensions used to explain within-individual differences in response to same environment over time or between-individual differences to same situation. Review of literature pertaining to environments that arouse 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, and personal and social responses to achieving success in the sport environment. Letter grading.

M236. Interdisciplinary Relationship Science. (4) (Same as Anthropology M295S, Education M297, and Sociology M270.) Lecture, three hours. Limited to graduate students. Diverse approaches to relationship science in fields of anthropology, education, psychology, and sociology. Focus on issues of concern to students interested in relationship science and research approaches to relationship science in fields of anthropology, education, psychology, and sociology. Focus on issues of concern to students interested in relationship science and research approaches to relation-ship science in fields of anthropology, education, psychology, and sociology. Focus on issues of concern to students interested in relationship science and research approaches to relationship science in fields of anthropology, education, psychology, and sociology. Focus on issues of concern to students interested in relationship science and research approaches to relation-ship science in fields of anthropology, education, psychology, and sociology. Focus on issues of concern to students interested in relationship science and research approaches to relationship science in fields of anthropology, education, psychology, and sociology. Focus on issues of concern to students interested in relationship science and research approaches to relationship science in fields of anthropology, education, psychology, and sociology. Focus on issues of concern to students interested in relationship science and research approaches to relationship science in fields of anthropology, education, psychology, and sociology. Focus on issues of concern to students interested in relationship science and research approaches to relationship science in fields of anthropology, education, psychology, and sociology. Focus on issues of concern to students interested in relationship science and research approaches to relationship science in fields of anthropology, education, psychology, and sociology. Focus on issues of concern to students interested in relationship science and research approaches to relationship science in fields of anthropology, education, psychology, and sociology. Focus on issues of concern to students interested in relationship science and research approaches to relationship science in fields of anthropology, education, psychology, and sociology. Focus on issues of concern to students interested in relationship science and research approaches to relationship science in fields of anthropology, education, psychology, and sociology. Focus on issues of concern to students interested in relationship science and research approaches to relationship science in fields of anthropology, education, psychology, and sociology. Focus on issues of concern to students interested in relationship science and research approaches to relationship science in fields of anthropology, education, psychology, and sociology. Focus on issues of concern to students interested in relationship science and research approaches to relationship science in fields of anthropology, education, psychology, and sociology. Focus on issues of concern to students interested in relationship science and research approaches to relationship science in fields of anthropology, education, psychology, and sociology. Focus on issues of concern to students interested in relationship science and research approaches to relationship science in fields of anthropology, education, psychology, and sociology. Focus on issues of concern to students interested in relationship science and research approaches to relationship science in fields of anthropology, education, psychology, and sociology. Focus on issues of concern to students interested in relationship science and research approaches to relationship science in fields of anthropology, education, psychology, and sociology. Focus on issues of concern to students interested in relationship science and research approaches to relationship science in fields of anthropology, education, psychology, and sociology. Focus on issues of concern to students interested in relationship science and research approaches to relationship science in fields of anthropology, education, psychology, and sociology. Focus on issues of concern to students interested in relationship science and research approaches to relationship science in fields of anthropology, education, psychology, and sociology. Focus on issues of concern to students interested in relationship science and research approaches to relationship science in fields of anthropology, education, psychology, and sociology. Focus on issues of concern to students interested in relationship science and research approaches to relationship science in fields of anthropology, education, psychology, and sociology. Focus on issues of concern to students interested in relationship science and research approaches to relationship science in fields of anthropology, education, psychology, and soci
M237A-M237B-M237C. Relationship Science Co-
rums. (2-2-2) (Same as Anthropology M295A-
M295B-M295C, Psychiatry M238.) Seminar, 90
minutes. Limited to graduate students. Current re-
search and theory about personal relationships pre-

tended by members of faculty, seminar members, and
guest speakers from diverse fields, including anthro-
pology, education, psychology, and sociology. May be
repeated for credit. S/U grading.

M238. Survey Research Techniques in Psychocu-
tural Studies. (Psychiatry M238.) Seminar, 90
minutes. Designed for graduate students. Techniques
for conceptualizing, conducting, and analy-
sing 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.
Current research and theory relating personality vari-
ables (e.g., attributional styles, self-esteem) to moti-
vational concerns such as persistence and intensity of
behavior. Perceived causes of outcomes in achieve-
mnt and affiliative domains. S/U or letter grading.

M240A. Language and Cognitive Development. (4)
Lecture, three hours. Preparation: one undergraduate
developmental psychology course in cognitive or lan-
guage development for graduate students. Considera-
tion of major topics and concepts, key theories,
latest methods, and research findings in develop-
ment of language and cognition. S/U or letter grading.

M240B. Social and Emotional Development. (4)
Lec-
ture, three hours. Preparation: one undergraduate de-
velopmental psychology course in social develop-
ment or related topic. Designed for graduate stu-
dents. Consideration of major topics and concepts, key
theories, latest methods, and research findings in social
and emotional development. S/U or letter grading.

M240C. Developmental Psychology. (4) Lecture,
three hours. Limited to graduate students. Introduction
to emerging field of developmental psychobiolo-
gy, including cognitive and affective neuroscience.
Consideration of major topics and concepts, key the-
ories, latest methods, and research findings. S/U or
letter grading.

241. Current Developments in Developmental Psy-
chology. (1) Discussion, 90 minutes. Designed for
graduate students. Consideration of major topics and

courses 250A, 250B. Introduction to research methods.
S/U or letter grading.

242A-M242G. Seminars: Developmental Psycholo-
gy. (4 each) Each course may be taken independ-
ently and may be repeated for credit:

242A. Perceptual Development. (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. (Seminar, three
hours. Requisites: courses 240A, 240B. May be taken
independently and may be repeated for credit. S/U or
letter grading.

242C. Socialization. (Seminar, three hours. Requi-
sites: courses 240A, 240B. May be taken inde-
pendently and may be repeated for credit. S/U or
letter grading.

242F. Development of Language and Communication.
(4) Seminar, three hours. Requisites: courses 240A,
240B. May be taken independently and may be re-
peated for credit. S/U or letter grading.

242G. Adolescent Development. (4) Same as Educa-
tion M217F Seminar, four hours. Designed for
graduate students. Review of recent research on
physical, cognitive, social, and psychological develop-
ment during second decade of life. Topics include
pubertal development, changes in parent/adolescent
relationships, role of peers, identity development,
high-risk behaviors, stress and coping, and school
adjustment.

243A-243B. Seminars: Practical and Societal Is-
ues in Developmental Psychology. (4-4) Seminar,
three hours. Requisites: courses 240A, 240B. Social-
ization processes in human development and implica-
tions for societal, political, educational, research issues,
values, and societal change. In Progress (243A) and
S/U or letter grading (243B) grading.

244. Critical Problems in Developmental Psycholo-
y. (4) Lecture, three hours. Requisites: courses 240A,
240B. Current problems with content depending
on interest of class and instructor. May be re-
peated for credit with consent of instructor.

245. Personality Development and Education. (4)
(Same as Education M217C.) Lecture, four hours.
Review of research and theory of critical content ar-
 eas in personality development that bear on school
performance: achievement motivation, self-concept,
aggression, sex differences, empathy, and other so-
cial behaviors; review of status of emotional behavior
in personality theory and development. S/U or letter
grading.

246. Psychological Aspects of Mental Retarda-
tion. (4) Same as Anthropology M293S. Applied Linguistics
M233, Education M256, Neuroscience M394.) Seminar,
three hours. Designed for graduate students. Integra-
tion of knowledge across different disciplines to un-

cide of current research in understanding complex rela-
tionships between culture, brain, and develop-
ment, where development includes both human on-
tology and human phylogeny. S/U or letter grading.

247. Culture, Brain, and Development. (4) Same as
Anthropology M293S, Applied Linguistics M233,
Education M256, and Neuroscience M394.) Seminar,
three hours. Designed for graduate students. Integra-
tion of knowledge across different disciplines to un-

cide of current research in understanding complex rela-
tionships between culture, brain, and develop-
ment, where development includes both human on-
tology and human phylogeny. S/U or letter grading.

248. Culture, Brain, and Development Forum. (1)
(Same as Anthropology M293S, Applied Linguistics
M233, Education M256, and Neuroscience M394.) Seminar,
90 minutes every other week. Interdisciplin-
ary seminar series to provide students with exposure
to current research in understanding complex relations-

d 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 special psychological issues. Survey includes
measurement of reliability, validity, and sensitivity.
S/U or letter grading.

250A. Advanced Psychological Statistics. (4)
Requisites: Education 211B, 231A. Exploratory factor
analysis, principal components analysis, and structural
equation modeling. S/U or letter grading.

250B. Discrete Multivariate Analysis. (4) Lec-
ture, four hours. Requisites: courses 250A, 250B.
Introduction to discrete and contingency table analy-
ses, and structural equation modeling. S/U or letter
grading.

250C. Advanced Psychological Statistics. (4)
Requisites: Education 211B, 231A. Exploratory factor
analysis, principal components analysis, and structural
equation modeling. S/U or letter grading.

251A-251B. Language Development. (2-2) Lecture,
three hours. Requisites: courses 250A, 250B. Introduction
to principles of reanalysis, including multivariate
analysis. Causal modeling: theory testing, and other

252A. Multivariate Analysis. (4) Lecture, three hours.
Requisites: courses 250A, 250B. Introduction to an-
alysis of data having multiple dependent variables. Top-
ics include continuous multivariate distributions, mul-
tiple regression, multivariate analysis of variance, dis-

criminant analysis, canonical correlation, principal com-
ponent analysis. Applications from clinical, cogni-
tive, physiological, and social psychology. Computer
methods.

252B. Discrete Multivariate Analysis. (4) Lecture,
three hours. Requisites: courses 250A, 250B. Intro-
duction to analysis of frequency data. Topics in-
clude categorical univariate and multivariate distribu-
tions, independence and conditional independence,
log-linear models, multivariate categorical designs, and
ordered categorical variables. Applications from various areas of psychology.

253A. Factor Analysis. (Formerly numbered 253.)
(Same as Education M211B.) Lecture, four hours.
Requisites: Education 211B, 231A. Exploratory factor
analysis, correlations, confirmatory factor analysis, multi-
ple-group analysis. S/U or letter grading.

254A. Computer Methods for Psychology. (4)
Lecture, three hours. Requisites: courses 250A, 250B.
Use of MATLAB, but only basic programming knowl-
edge assumed; prior knowledge of MATLAB re-
quired. Designed to teach basic computer methods
relevant to work in experimental psychology and
cognitive science. Topics include simulation/model-
ling, statistical data analysis, and stimulus presenta-

dation. S/U or letter grading.

255A. Quantitative Aspects of Assessment. (4)
Lecture, four hours. Requisites: courses 250A, 250B.
Introduction to research methods in research on
measures. Topics include factor and multiple re-
gression, principal components analysis, exploratory
factor analysis, confirmatory factor analysis, path analysis,
and structural equation modeling. S/U or letter
grading.

(4) Lecture, four hours. Requisites: courses 250A, 250B.
Introduction to cognitive science, including cognitive
systems and recent research in cognitive science.
S/U grading.

256B. Advanced Multilevel Modeling. (4) Lecture,
four hours. Requisite: course 256A. Advanced topics
in analysis of clustered and longitudinal data, includ-
ing nonlinear models, multilevel mediation, nonhierar-
chal data structures, meta-analysis, modeling vari-

cer, and other topics of student interest. Readings in
both quantitative and substantive multilevel model-

ing literature. S/U or letter grading.

257A. Multivariate Analysis with Latent Variables.
(4) (Same as Political Science M208B and Statistics
M242.) Lecture, three hours. Introduction to models
and methods for analysis of data hypothesized to be
generated by unmeasured latent variables, including
latent variable analogues of traditional methods in
multivariate analysis. Causal modeling: theory testing
via analysis of moment structures. Measurement
models such as confirmatory factor analysis, con-
structured-means factory analytic models. Structural
equation models, including path and simultaneous
equation models. Parameter estimation, hypothesis
testing, and other statistical issues. Computer imple-

258. Special Problems in Psychological Statistics.
(4) Lecture, three hours. Requisites: courses 250A, 250B.
Special problems in psychological statistics and
data analysis.
Quantitative Methods in Cognitive Psychol-
ogy. (4) Requisites: courses 250A, 250B. Number of nonstatistical and nonmathematical methods and techniques commonly used in cognitive psychology. Topics include Markov chains, other stochastic processes, queueing theory, information theory, frequency analy-
sis, etc. S/U grading.

Perception. (4) Lecture, three hours. Concepts, theories, and research in study of perception. Topics in-
erators the questions: Why do things look, sound, smell, taste, or feel as they do? What is the nature of per-
ceptual systems? How do these systems process in-
formation?

Human Learning and Memory. (4) Lecture, three hours. Contemporary theory and research in hu-
man verbal learning and memory; verbal and nonver-
bal learning and memory processes, structure and or-
ganization of short- and long-term memory. S/U or letter grading.

Psycholinguistics. (4) Lecture, three hours. Contemporary theory and research in psycholinguistics:
explicit use of psychological parameters of language learning, speech recognition and perception, S/U or letter grading.

Thinking. (4) Lecture, three hours. Contemporary theory and research in thinking, problem solving, inference, semantic memory, internal representation of knowledge, imagery, concepts. S/U or letter grading.


Cognitive Science. (4) Lecture, three hours. Major issues in cognitive science. Representation of cognitive structures and higher-level processes. Spec-
cific areas include perception, learning and memory, problem solving, and reasoning. Relationships to arti-
ficial intelligence.

Neuroeconomics. (4) (Same as Management M236E.) Seminar, three hours. Limited to graduate students. Questions related to primary research on con-
sciousness and neural bases of decision making. S/U or letter grading.

Human Information Processing. (4 each) Seminar, three hours. Topics vary with instructor. Each course may be taken independently for credit. S/U grading.

Human Learning and Memory; 268B. Judgment and Decision Processes; 268D. Human-Computer Interaction. (4) Lecture, three hours. Limited to graduate stu-
dents. Survey of major issues in 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 interven-
tions. May be taken independently for credit. Letter grading.

Special Problems. (4) Seminar, three hours. Requisite or corequisite: course 401 or 451. May be taken inde-
pendently for credit.

Behavior Modification with Children. (4) Semi-
nar, three hours. Requisites: courses 271A, 271B, 271C. Course in series of clinical intervention and as-
essment offerings for second- and third-year clinical students that covers behavior modification research and practice in clinic, school, institution, and home settings. May be taken independently for credit.

Marital Therapies. (4) Lecture, two hours; dis-
sicussion, one hour. Requisite or corequisite: course 401 or 451. May be taken inde-
pendently for credit.

Toxin exposures and their effects on the central nervous system, including drug addiction, alcoholism, and nicotine dependence. S/U or letter grading.

Cognitive Psychology. (4) Seminar, three hours. Discussion of problems in cognitive psychol-
ogy that encompass more than a single subfield of the area. May be repeated for credit.

Clinical Research Laboratories. (2-2) Seminar, four hours. S/U or letter grading.

Psychological Assessment. (4-4-4) Seminar, four hours. Requisite or corequisite: course 401 or 451. May be taken independently for credit.

Clinical Psychology Lab. (2) Lecture, one hour; discussion, one hour. Designed for graduate students. May be taken independently for credit.

Clinical Research Laboratories. (2-2) Corequisites: courses 270A, 270B, 270C. Procedures in clinical psychology as applied in clinical and community settings. Supervised exposure to psychological assessment and pro-

Clinical Research Laboratory. (2) Discus-
sion, one hour; laboratory, one hour. Corequisites: courses 270A or 270B or 270C, and 271A or 271B or 271C. Designed for graduate clinical psychology stu-
dents. Acquaints students with faculty research inter-
ests and involves them in their course 251 research at an early stage to insure completion. S/U grading.

Behavior Modification. (4) Seminar. Three hours. Requisite: course 271D. Designed for graduate clinical psychology students. Required of first-year clini-
cal psychology students. S/U grading.

Behavior Modification with Children. (4) Semi-
nar, three hours. Requisites: courses 271A, 271B, 271C. Course in series of clinical intervention and as-

Behavior Modification with Adults. (4) Seminar, three hours. Requisite or corequisite: course 401 or 451. Designed for second-year graduate clinical psy-
chology students. Current cognitive behavior modifi-
cation principles and techniques. Major conceptual issues; specific techniques demonstrated and prac-
ticed by students to cover a range of adult problems such as depression, stress and anxiety, anger man-
agement, assertion problems. May be taken inde-
pendently for credit. Letter grading.

Behavioral Medicine. (4) Seminar, three hours. Requisite or corequisite: course 401 or 451. Designed for second-year graduate clinical psy-
chology students. Application of assessment to problems in psychotherapy. S/U or letter grading.

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chology students. Application of assessment to problems in psychotherapy. S/U or letter grading.
Emphasis on assessment and intervention, with consideration of historical, theoretical, and research bases for current 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.

290. History and Systems of Psychology. (2) Seminar, two hours. Requisites: courses 251A, 251B, 251C. Rich tradition of history of full scope of psychology as scientific discipline, with particular emphasis on cognitive, social/personality, development, and biological aspects of discipline. Broad treatment of how various emphases within broader field have evolved. S/U or letter grading.


292. Biobehavioral Mechanisms of Stress and Disease. (4) Lecture, three hours. Designed for graduate psychology students. Behavior/physiology interaction of some major bodily systems: nervous, cardiovascular, gastrointestinal, and endocrine systems. Usual and altered states of these systems (stress) as these can promote permanent tissue injuries, disease, or improved bodily function, health enhancement. S/U or letter grading.

298B. Psychosocial Contributors to Ethnic Disparities in Health. 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.

299. Behavioral and Psychophysiological Problems of Alcoholism. (4) Lecture, four hours. Behavioral and neurophysiological characteristics of alcoholism, along with theories concerning their etiology and characteristics of alcoholism. Letter grading.

260A. Research Topics in Psychology. (1) Formerly numbered 296A. Research group meeting, one hour. Limited to graduate students. Discussion of current literature, new ideas, methodological issues, and preliminary findings. Field presentations and opportunities for feedback on current and proposed research activity to encourage, support, and facilitate student research expertise. Assigned readings including ed. S/U or letter grading.

C296B. 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 other issues. Assigned readings and opportunities for feedback on current research activity. S/U or letter grading.

297. Issues in Social Development of Minority Child. (4) Seminar, three hours. Designed for gradu-ate students. Critical evaluation and integration of exist-ing research on social psychological development of minority child. Emphasis on socialization of cogni-tive and personality style, with goal of empirically clarifying issues and identifying areas 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 personal-ly 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.

401. Fieldwork in Clinical Psychology. (1 to 12) Fieldwork, to be arranged. Requisites: courses 271A, 271B, 271C. Students on practicum assignments are required to register for this course each term (except by consent of clinical program). S/U or letter grading.

402. Clinical Research Practicum. (2) Fieldwork, two hours. Faculty and graduate students who share interests discuss current literature, research designs, method-ological issues, and preliminary findings. Meetings include 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 or letter 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-led study group to pursue specific topic of their choice that is not covered in other department courses. S/U or letter grading.

410A-410B-410C. Clinical Teaching and Supervision. (4-4-4) Clinic, four hours. Preparation: comple- tion of Ph.D. comprehensive examinations, advance-ment to candidacy or preparation for dissertation re-search actively under way. Study and practice of test construction, introduction to research data collection, and evaluation of applied clinical psychology. S/U or letter grading.

410D-410E-410F. Clinical Assessment Supervision. (4-4-4) Clinic, two hours; other, one hour. Designed for third-year graduate clinical psychology students. Study and practice of knowledge, concepts, and the-ories on teaching and supervision of psychological assessment. Letter grading.

410A-410B. Health Psychology Practicum. (2-2) Fieldwork, to be arranged for graduate stu-dents. Determination of what areas of health, illness, treatment, and delivery of treatment can be elucidat-ed by understanding of psychological concepts and research; psychological perspective on these prob-lems. Letter grading.

596. Directed Individual Research and Study in Psychology. (2 to 12) Tutorial, to be arranged. One 596 course is required during second year of gradu-ate study, and one 596 or 599 course is required during each succeeding year of graduate study. Termin-al M.A. candidates are exempt from this require-ment. S/U grading.

597. Individual Studies. (2 to 12) Tutorial, to be ar- ranged. Designed primarily as preparation for Ph.D. qualifying examinations. May be required by some area committees as requisite for taking examinations. S/U grading.

599. Research for Ph.D. Dissertation. (2 to 12) Tu-torial, to be arranged. Preparation: successful comple- tion 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

3537 Public Affairs Building

Box 951656

Los Angeles, CA 90095-1656

(310) 206-8966

e-mail: paul@luskin.ucla.edu

http://luskin.ucla.edu/content/undergraduate-programs

Anastasia Loukaitou-Sideris, Ph.D., Chair
Public Affairs Minor

The Public Affairs minor teaches undergraduate students the skills of policy analysis and exposes them to many of the local, state, national, and international issues facing today’s policymakers and opinion leaders. Courses explore the public (governmental) and nonprofit sectors and provide a theoretical, conceptual, and practical foundation for students. Particular attention is given to the vexing issues facing urban areas and urban planners, social welfare and social workers, and public policies that affect individuals and groups of people in their public and private lives.

Undergraduate Study

Public Affairs Minor

To enter the Public Affairs minor, students must have an overall grade-point average of 2.0 or better and complete Public Policy 10A with a grade of B or better. For further information, contact the program director/counselor at (310) 206-8966.

Required Core Courses (6 units): Public Policy 10A and one course from 108, C101, 102, M116, C119, 125, Honors Collegium 82, Social Welfare 191, Urban Planning 120, 121 or, by petition only, another applied policy course. Highly recommended: one statistics and one microeconomics course.

Required Upper Division Courses (20 units): (1) Three courses from one of the following clusters: (a) gender and multiculturalism cluster — Public Policy M120, Social Welfare 101, M104C, Urban Planning 141, M175; (b) labor and workforce 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.

A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor. Each minor course must be taken for a letter grade, and students must have an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

Public Health

Public Health

Interdisciplinary Minor

Jonathan and Karin Fielding School of Public Health

UCLA

A1-269 Center for the Health Sciences
Box 951772
Los Angeles, CA 90095-1772
(310) 825-5524
fax: (310) 825-5617
http://ph.ucla.edu/academics/degrees/public-health-minor

Marjorie Kagawa-Singer, Ph.D., M.A., M.N., R.N., Chair

Faculty Committee

Dorota Dabrowska, Ph.D. (Biostatistics)
Shane S. Que Hee, Ph.D. (Environmental Health Sciences)
Marjorie Kagawa-Singer, Ph.D., M.A., M.N., R.N. (Community Health Sciences)
Robertta M. Malmgren, Ph.D. (Epidemiology)
Ninez A. Ponce, Ph.D. (Health Policy and Management)

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 health policies designed to solve identified local and national health problems and priorities, the assurance that all populations have access to appropriate and cost-effective care, and the evaluation of the effectiveness of that care.

Undergraduate Study

Public Health Minor

To enter the Public Health minor, students must be in good academic standing with an overall grade-point average of 2.0 or better, have completed 90 or more units, and file a petition at the Fielding School of Public Health Student Affairs Office, A1-269 Center for 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 Policy and Management 100, Public Health 150 (must be taken during the first term of enrollment in the minor), and one elective course to be selected from Biostatistics 100B, Community Health Sciences 90, 91, 130, 132, M140, 180, 181, Health Policy and Management M110, C121, Public Health 53, M106, or M151. Transfer credit for any of the above is subject to school approval.

A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor.

Each minor course must be taken for a letter grade, and students must have a minimum grade of C (2.0) in each and an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.
Division website, http://grad.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 Fielding School of Public Health offers two schoolwide 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, Community Health Sciences, Environmental Health Sciences, Epidemiology, and Health Policy and Management. An undergraduate minor in Public Health is also offered.

One interdepartmental degree program — the M.D. in Molecular Toxicology — is also available.


Public Health

Lower Division Courses

10. Introduction to Public Health. (4) Seminar, three hours. Designed for lower division students. Introduction to range of topics, issues, and frameworks to help students understand current public health issues and public health systems, policies, and practices. P/NP or letter grading.


Upper Division Courses


M151L. Healthcare in Transitional Communities. (4) (Same as Sociology M142L) 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.

M160L. Health Outreach and Education for At-Risk Populations. (4) (Same as Medicine M160L) 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.

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 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 Luskin 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 faculty: (310) 206-0337

discuss on the role of Money and Financial Markets)

fax administration/admissions: (310) 206-2381

e-mail: mppinfo@luskin.ucla.edu

http://luskin.ucla.edu/public-policy

Michael A. Stoll, Ph.D., Chair

Professors

Joel D. Aberbach, Ph.D.

Albert Carnesale, Ph.D.

Michael R. Darby, Ph.D. (Warren C. Corder Professor of Money and Financial Markets)

J.R. DeShazo, M.Sc., Ph.D.

Franklin D. Gilliam, Ph.D.

Neal Halpern, M.D., M.P.H.

Sanford M. Jacoby, Ph.D. (Howard Noble Professor of Management)

Robert T. Jensen, Ph.D.

Mark A.R. Kleiman, Ph.D.

Sarah J. Reber, Ph.D.

Charles E. Young, Ph.D.

Professor Emeriti

Robert Dallek, J.D. (Richard C. Maxwell Professor of Law)

Michael D. Intriligator, Ph.D.

Archie Kleingartner, Ph.D.

Arleen Leibowitz, Ph.D.

Daniel J.B. Mitchell, Ph.D. (Ho-Su Wu Professor of Management)

Barbara J. Nelson, Ph.D.

Richard N. Rosecrance, Ph.D.

Allen J. Scott, Ph.D.

Joel F. Handler, J.D. (Richard C. Maxwell Professor of Law)

Michael D. Intriligator, Ph.D.

Archie Kleingartner, Ph.D.

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Barbara J. Nelson, Ph.D.

Richard N. Rosecrance, Ph.D.

Allen J. Scott, Ph.D.

Charles E. Young, Ph.D.

Associate Professors

Meredith Phillips, Ph.D.

Sarah J. Reber, Ph.D.

Assistant Professors

Randall K. Akee, Ph.D.

Aaron L. Panofsky, Ph.D.

Manisha Shah, Ph.D.

Lecturers

C. Mike Dennis, M.P.A., C.P.F.O.

Rick Tuttle, Ph.D.

Adjunct Assistant Professor

Brett Williams, Ph.D.

Visiting Professor

Michael S. Dukakis, J.D.

Scope and Objectives

The Department of Public Policy is an interdisciplinary unit composed of faculty members from various disciplines, some of whom hold joint appointments in other UCLA departments. Its goal is to foster an understanding of the theory and practice of public policy in the many fields in which it applies. Examples include education, healthcare, unemployment and training, drug policy and crime, economic development, national security, and the environment. The department offers the Master of Public Policy (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 Anderson Graduate School of Management, an M.D. in the Geffen School of Medicine, an M.P.H. in the Fielding 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 in 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://grad.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 Department of Public Policy offers the Master of Public Policy (M.P.P.) degree. Five 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./Medicine M.D., 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. Overview of principal topics of contemporary policy analysis, developing their applications with examples from instructor’s own research, visitors, small student projects, or field trips. Letter grading.

10B. California Public Issues. (4) Lecture, three hours; outside study, nine hours. Application of policy analysis to California issues. Guest lectures from practitioners and academics along with readings and videos. Student written reports and oral presentations required. Letter grading.

Upper Division Courses
C101. Drug Abuse Control Policy. (4) Lecture, three hours; outside study, nine hours. Introduction to drug abuse as social problem and to drug abuse control as policy. Exploration of two pieces of the puzzle in modern drug policy. Required. Letter grading.


M116. Nuclear Weapons: Critical Decisions. (4) (Same as Environment M119, and Political Science M138B.) 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.

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, 137A, 137B. In-depth look at theory and practice of U.S. foreign policy-making. Assessment of comprehension through written and oral papers and application to specific case studies. Weekly role plays of foreign policymakers and final crisis simulation exercise. Concurrently scheduled with course CM272. Letter grading.

M118. U.S. Intelligence Agencies in Theory and Practice. (4) (Same as Political Science M120C.) Lecture, three hours; discussion, one hour. Limited to juniors/seniors. Examination of U.S. intelligence agencies from Cold War to present. Particularity in light of 9/11 and Iraq war, few organizations are more important and less understood. Course separates fact from fiction, comparing how intelligence agencies are portrayed in popular media and how they operate in practice. Fundamentals of intelligence collection (from satellites to spies) and analytic tradecraft; key challenges such as role of ethics in intelligence; performance of U.S. intelligence agencies during Cold War; and intelligence community’s ability to adapt to rise of terrorism. Application of general concepts to specific case studies of Cuban missile crisis, 2003 Iraq war, and September 11, 2001, terrorist attacks. P/NP or letter grading.


M120. Race, Inequality, and Public Policy. (4) (Same as Afro-American Studies M120.) Lecture, three hours; discussion, one hour. Background in economics, sociology, or urban studies preferred but not required. Survey course to examine major debates and current controversies concerning public policy responses to social problems in urban America. Letter grading.

C122. Ethics and Governance. (4) (Same as Political Science M115A) Lecture, three or four hours; discussion, one hour (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? How do we reason about whether action X is morally right or wrong? How can we design governance structures that encourage people to act ethically, control public goods, and lead productive and fulfilling lives? P/NP or letter grading.

CM123. U.S. National Security Policy. (4) (Same as Political Science M125B) Lecture, three hours; outside study, nine hours. Study of U.S. national security policy. 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 policymaking process from 1945 to present. Examination of broad spectrum of issues confronting today’s foreign policy leaders, from threats to U.S. interests (terrorism, to regional security and economic challenges (Iraq, China), to humanitarian intervention and nation-building (Darfur, Afghanistan). Students study draft analytic options memos and deliver oral presentations on how to handle six current national security mini-cases. Provides overview of current challenges and hones student analytical skills to examine these challenges. Concurrently scheduled with course C274. Letter grading.

C124. Budget Politics, Social Policy, and Entitlement Reform. (4) Lecture, three hours; outside study, nine hours. Examination of politics of public budgeting in the U.S., with emphasis on financing of social safety net. Exploitation of budgetary process as setting both for gaining substantive knowledge about how government really works and for developing political skills required to influence resource allocation decisions. Concurrently scheduled with course C239. Letter grading.

125. Rights and Wrongs of Affirmative Action. (4) Lecture, three hours; discussion, one hour. Limited to juniors/seniors. Exploration of race-based affirmative action from moral, political, and social philosophy standpoint. Topics include defining discrimination, individual and group equality; different meanings of “diversity”; meritocracy and its critics; historical and future-based arguments; sociology of values; possibilities for moral compromise. Letter grading.

M126. Political Ethics. (4) (Formerly numbered CM126) (Same as Political Science M115B) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Study of major issues in morality, or lack thereof, of political life. Coverage of theories and practice of political ethics, especially as they relate to race, gender, and sexual orientation. Exploration of real-world examples, such as Watergate, terrorism, civil rights politics, and presidential campaigns. Topics include basic ethical theory, role-relationship theory, Machiavellian mistrust, democratic responsibility and representation, ethics of compromise, dirty hands problems, international ethics. Letter grading.

C127. Understanding Public Issue Life Cycle. (4) (Same as Political Science M142D.) Lecture, three or four hours; discussion, one hour (when scheduled). Recommended preparation: Political Science 10, 40, and one course from Economics 1, 2, 5, 11, or 101. Examination of how public issue life cycle is shaped by economic and political incentives of various actors -- business, news media, mass public, organized
interests, Congress, the president, regulatory agencies, and courts and (2) ideology, cognitive biases, and ethical concerns.

141. Employment and Labor Policy: Survey. (4) Lecture, three hours; outside study, nine hours. Requisite: course 10A. Introduction to current public policy issues in employment, labor relations, and labor markets. Historical context for current employment and labor policies in the U.S. Pro and con philosophical analysis of reasons for government regulation. Analysis of current data on labor unions, the workplace, and labor rights. Workforce diversity and education and training, social welfare policy, and global issues (immigration, trade, and global economy as it affects the workforce). Future trends and issues on policing.

C144. Comparative Industrial Relations. (4) Lecture, three hours; outside study, nine hours. Requisite: course 10A. At national and international levels, historical and contemporary analytical comparison of political, economic, and social contexts influencing human resource systems of selected developed countries. In addition to discussing possible frameworks for analyzing human resource systems, examination of labor standards, protective legislation for women workers, industrial relations, civil rights, occupational safety and health, and international labor standards in (1) historical context (economic, political, and ideological), (2) political, social, and economic contexts, and (3) changes in government involvement in public policy.

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. Exploration of important policy areas such as child labor, labor standards, protective legislation for women workers, industrial relations, civil rights, occupational safety and health, and international labor standards in (1) historical context (economic, political, and ideological), (2) political, social, and economic contexts, and (3) changes in government involvement in public policy.

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 critiques; justified disobedience in response to inequality, injustice, and moral exclusion; moral and religious pluralism as an argument for both obedience and dissent. Lecture.

C147. Critical Policy Issues and Problems in Globalizing World. (4) Lecture, three hours; outside study, nine hours. Requisite: American Studies 10A. Introduction to key issues arising at the interface between business and government policy. Discussion of why government focuses so intensively on regulating economic outcomes, nature of business/government relationship, business political activity, and major government policies. Topics include economic regulation (industrial policy, antitrust, technology policy); social regulation of business (energy, environment, risk, liability, corporate social responsibility, business ethics, and green business). Discussion of topics in their historical and political context, with comparison between economic regulation in the U.S. and other advanced countries.

M149. California Sustainable Development: Economic Perspective. (4) Same as Environment M135 and Urban Planning M183.) Lecture, three hours. Examination of specific environmental challenges that California faces. Microeconomic perspective used, with special emphasis on incentives of polluters to reduce their pollution and incentives of local, federal, and state government to address these issues. Focus on measurement and empirical hypothesis testing. P/NP or letter grading.

C182. Science, Technology, and Public Policy. (4) Lecture, three hours. Recent and continuing advances in science and technology are raising profoundly important public policy issues. Consideration of selective employment of science which has substantial ethical, social, economic, political, scientific, and technological aspects. Concurrently scheduled with course C282. Letter grading.

M186. Equal Rights and Unequal Education. (4) (Same as Education M186 and Political Science M183.) Lecture, four hours. Exploration of contradictions between American beliefs about equal opportunity and racial and gender inequalities that exist in public education. Examination of legislation and public policy in education as vehicles for understanding philosophical and empirical complexities of issues surrounding equality in American education and life. Examination of issues from legal, sociological, political, and philosophical perspectives. Arguments range from Martin Luther King to Ronald Reagan, and legal cases include Plessy versus Ferguson to Brown versus Board of Education, as well as cases still pending in courts. Letter grading.

187. Research Seminar: Public Policy. (4) Seminar, three hours; outside study, nine hours. Requisite: courses 201 and 202. Seminar of seniors in Public Affairs minor. Production of research project that examines in depth one particular policy issue in its social context, including political pressures involved and problems of implementation. Emphasis on skills of conceptualization, development of argument, and written analysis and presentation. Letter grading.

191A. Variable Topics Research Seminars: Public Policy. (4) Seminar, three hours; outside study, nine hours. Requisite: course 10A. Examination of particular subfields of policy studies (e.g., international policy, crime policy, policy history) in depth, with specific topics to be identified by instructor. 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: Public Policy. (3) Seminar, three hours; outside study, six hours. Examination of particular subfields of policy studies (e.g., international policy, crime policy, policy history) in depth, with specific topics to be identified by instructor. Reading, discussion, and development of culminating project. May be repeated for credit with topic change. P/NP or letter grading.

191C. Variable Topics Research Seminars: Public Policy. (2) Seminar, two hours; outside study, four hours. Examination of particular subfields of policy studies (e.g., international policy, crime policy, policy history) in depth, with specific topics to be identified by instructor. Reading, discussion, and development of culminating project. May be repeated for credit with topic change. P/NP or letter grading.

193A. Marschak Colloquium: Social Sciences. (2) Seminar, two hours; outside study, two hours. Discussion by students of topics of value to students. Attendance at biweekly Marschak Colloquium presentations, highly regarded and long-standing interdisciplinary lecture series given by leading social science experts, required. Discussion of lecture topics and research models in behavioral sciences. Letter grading.

197. Individual Studies in Public Policy. (2 or 4) Tutorial, four hours. Preparation: 3.0 grade-point average. 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. Principles of Microeconomic Theory I. (4) Lecture, three hours; outside study, nine hours. First course in two-term sequence (see course 202) 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 potential environment of policy and administration. Discussion of U.S. constitutional arrangements, followed by instrumental and integrative examination of primary institutions of politics and governance from organized interests to legislatures, bureaucracies, and courts. 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 208). Review of statistical principles useful to policy research and analysis. Topics include descriptive statistics, expectation, univariate distribution, probability, covariance and correlations, statistical independence, random sampling, estimators, 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 202) covering both theory and policy applications. Topics include monopoly, factor markets, general equilibrium, welfare economics, externalities, public goods, uncertainty, and intertemporal optimization. Letter grading.

205. Institutional Leadership and Public Manager. (4) Lecture, three hours; outside study, nine hours. Examination of leadership role of executives in public service as they lead and manage in tough day-to-day world of politics and intensive public scrutiny. Heavy emphasis on case studies that focus on what public managers do, political and organizational environment in which they find themselves, and skills they need both inside and outside their organization to get things done with high degree of competence and integrity. Letter grading.

206. Political Economy of Policy Adoption and Implementation. (4) Lecture, three hours; outside study, nine hours. Analysis of how policy is formed, adopted, and implemented. How policies are formulated, by whom, how policy agendas are set, how to define relationships between politicians, bureaucrats, lobbyists, and media experts. Letter grading.

207. International Political Economy. (4) Lecture, three hours; outside study, nine hours. Examination of political, legal, and social institutions to show where the U.S. fits in among varieties of modern capitalism and business/government relations. Analysis of domestic policy options nations are pursuing in response to economic globalization, such as protectionism, mercantilism, and deregulation. Introduction to international coalitions being formed, including NAFTA, and to nongovernmental organizations created to deal with special problems such as global environmental crisis. Letter grading.

209. Management in the 21st Century. (4) Lecture, three hours; outside study, nine hours. Overview of moral, political, and ethical theories and ethics using readings from classical and contemporary literature and case studies. Consideration of various ways in which terms such as "democracy" and "liberty" are used in public discourse. Practice in developing and delivering oral arguments, both orally and in writing. Letter grading.

210. Methods of Policy Analysis. (4) Lecture, three hours; outside study, nine hours. Preparatory course that develops analytical logic essential for conceptualizing public policy issues and analyzing policy alternatives. Topics include identification of policy problems, construction of alternative policy solutions, synthesis of evidence, and evaluation of policy interventions. 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, arguments, and tools essential for addressing questions of public policy. Normative questions are those that concern whether actions, character, 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 issues that concern us more urgently than others: those that go beyond matters of economic efficiency and touch on questions of human dignity, justice, equality, or national or cultural traditions that seem to be subject to efficiency analysis raise some strong ethical concerns distinct from those of efficiency. Discussion of disagreement that exists over both what efficiency is and in what cases or across what dimensions it ought to govern. Letter grading.

M212. Child Welfare Policy. (Same as Social Welfare M290G.) Lecture, three hours. Development of social welfare policy as understood across different cultural backgrounds and as it is given form in public child welfare system. Examination of development of infrastructure to support needs of children and families. S/U or letter grading.

M213. Mental Health Policy. (Same as Social Welfare M290K.) 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 disorders and services they are provided. S/U or letter grading.


M215. Health Policy. (Same as Social Welfare M290M.) 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.

M216. Public Policy for Children and Youth. (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. (Same as Urban Planning M204.) Lecture, three hours; outside study, nine hours. Limited to graduate students. How to become more sophisticated consumers and producers of qualitative and quantitative policy research. In first half of course, formal principles of research design; in second half, various data collection methods, including ethnography, interviewing, and survey design. Letter grading.


Theories of crime causation and prevention and their relationship to impacts of alternative policies. Concurrently scheduled with course C119. Letter grading.

M220. Transportation, Land Use, and Urban Form. (Same as Urban Planning M250.) Lecture, three hours. Historical evolution of urban form and transportation systems, intranational location theory, regional planning and development, and urban growth hypothesis, jobs/housing balance, transportation in strong central city and polycentric city, neotraditional town planning debate, rail transit and urban form. Letter grading.

M221. Travel Behavior Analysis. (4) (Same as Urban Planning M253S.) Lecture, three hours. Requisites: courses 201 and 203, or Urban Planning 207 and 220S. Descriptions of travel patterns in metropolitan area; recent trends and projections into future; overview of travel forecasting methods, trip generation, trip distribution, mode split traffic assignment, critique of traditional travel forecasting methods and new approaches to travel behavior analysis. Letter grading.

M222. Transportation Economics, Finance, and Policy. (Same as Urban Planning M256S.) Lecture, three hours. Overview of transportation finance and economics; concepts of efficiency and equity in transportation financing; circulation 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 finance; transit fare and subsidy policies, contracting and privatization of transit services. Letter grading.

M223. Transportation and Environmental Issues. (Same as Urban Planning M256S.) Lecture, three hours. Regulatory structure linking transportation, air quality, and energy issues, chemistry of air pollution, overview of transportation-related approaches to air quality enhancement; new car tailpipe standards; vehicile inspection and maintenance issues; transportation demand management and transportation control measures; alternative fuels and electric vehicles; corporate average fuel economy and global warming issues; growth of automobile worldwide fleet; automobile in sustainability debate. Letter grading.

M224A. Introduction to Geographic Information Systems. (4) (Same as Urban Planning M206A.) Lecture, three hours; laboratory, one hour. Preparation: one graduate-level statistics course, familiarity with one packaged statistics program. Principles of Geographic Information Systems (GIS) and applied techniques, such as data mapping and analysis. Topics include data quality, data manipulation, spatial analysis, and information systems. Use of mapping and spatial analysis to address planning problem. Letter grading.

M224B. Advanced Geographic Information Systems. (4) (Same as Urban Planning M206B.) Studio, three hours. Requisites: course M224A or Urban Planning M206A. Knowledge and skill development necessary to plan, design, develop, and publish Web-based geographic information systems (GIS) solution. Coverage of basics of Internet programming languages, including JavaScript, jQuery, CSS, and HTML. Exploration of different Web-authoring tools, including WordPress as content management platform, Google Maps API, and ArcGIS Server. Students draw on prior experience with SyncMap to apply spatial layers for dynamic interaction with Web-mapping solutions. Letter grading.

225. Education Policy and Education Inequality. (4) Seminar, three hours; outside study, nine hours. Limited to graduate students. Examination of policies that may reduce socioeconomic and ethnic disparities in educational success. Topics include international and national comparisons of educational outcomes, private and public school choice, accountability policies, interventions to improve school or teacher quality, parenting and preschool interventions, and supplemental educational services. Letter grading.


Fundamental building blocks for successful management in nonprofit sector. Students develop management tools in project planning, project management, team building, and negotiation. Use of case studies to troubleshoot critical challenges, from finance to crisis management to marketing, that nonprofit managers typically face. Letter grading.

M227. Nonprofit Sector, State and Civil Society. (4) (Same as Social Welfare M290S and Urban Planning M287.) Lecture, three hours; outside study, nine hours. Use of political economy perspective to analyze forces that shape 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.

M228. Leadership, Development, and Governance of Nonprofit Organizations. (4) (Same as Social Welfare M290A.) 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.

M229. Law and Management of Nonprofit Organizations. (4) (Same as Management M225.) Lecture, three hours. Introduction to important legal, financial, and management issues confronting nonprofit organizations. Topics include how to start nonprofit tax-exempt organizations, qualifying and maintaining tax-exempt status under IRC Code Section 501(c)(3), corporate governance principles, tax-exempt status under IRC Code Section 501(c)(3), corporate average fuel economy and global warming issues, growth of automobile worldwide fleet; automobile in sustainability debate. Letter grading.

CM231. Comparative Industrial Relations. (4) (Same as Management M231.) Lecture, three hours; outside study, nine hours. Requisite: Management 409 or elementary knowledge of labor economics. At national and international levels, historical and contemporaneous analytical comparison of labor, management, and economic contexts influencing human resource systems of selected developed countries. In addition to discussing possible frameworks for analyzing human resource systems, examination of different labor and management 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 and exercise of res- trictions, and strategic planning, fundraising, non- profit accounting, and employment law. S/U or letter grading.

CM232. Labor Relations: Process and Law. (4) (Same as Management M250A.) Lecture, three hours. Requisite: Management 409 or elementary knowledge of labor economics. At national and international levels, historical and contemporaneous analytical comparison of labor, management, and economic contexts influencing human resource systems of selected developed countries. In addition to discussing possible frameworks for analyzing human resource systems, examination of different labor and management 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 and exercise of restric- tions, and strategic planning, fundraising, non- profit accounting, and employment law. S/U or letter grading.

233. Employment Issues in California. (4) Lecture, three hours; outside study, nine hours. Designed for graduate students. Consideration, at advanced level, of collective bargaining process, labor/management agreement, administration of the contract, law of labor/management relations, union struc- ture and goals, and influence of external labor mar-kets on labor relations. S/U or letter grading.

234. Labor Markets and Social Policy. (4) (Same as Management M250A.) Lecture, three hours. Examination of analytical tools and conceptual models needed to understand policies directed toward people in lower tail of income distribution. Concepts include static and dynamic labor supply, labor demand, compensating differentials, human capital, and economic models of immigration and crime. Letter grading.
C235. Drug Abuse Control Policy. (4) Lecture, three hours; outside study, nine hours. Introduction to drug abuse as a public health problem. Analysis of role of interdisciplinary teamwork in crafting and implementing policy issues, with examination of both necessity and difficulty of making and executing wise policies around psychoactive substances. Concurrently scheduled with course C101. Letter grading.

C237. Ethnicity in Public Life. (4) Lecture, three hours; outside study, nine hours. Introduction to moral issues that commonly arise in public life. Ethics of political roles, compromise and moral integrity, lying and deception, and rhetoric in defending stand on issues, politics and violence. Letter grading.

C238. Issues in Cultural Policy. (4) Seminar, three hours; outside study, nine hours. Designed for graduate students. Survey of role of policy in shaping forms and meanings of cultural and cultural activities in contemporary society. Overview of relevant theories of culture and their ramifications in such phenomena as consciousness, ideology, and identity. Empirical examination of cultural intersections to be subject for trend analysis. Examination of cultural intersecting to be subject for trend analysis. Examination of cultural intersecting to be subject for trend analysis. 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. Exploitation of budgetary process as setting both for gaining substantive knowledge about how government really works and for developing critical skills that influence to resource allocation decisions. Concurrently scheduled with course C124. Letter grading.

C240. Theories of Regional Economic Develop-ment I (4) Seminar (M236A and Urban Planning M236A-L). Lecture, three hours; discussion, one hour. Introduction to theories of location of economic activity, trade, and other forms of contact between regions, process of regional growth and decline, reasons for different levels of economic development, relations between more and less developed regions. Letter grading.

C241. Introduction to Regional Planning. (4) (Same as Urban Planning M236B.) Lecture, three hours; outside study, nine hours. Designed for graduate students. Analysis of decision-making processes that affect substantive social welfare problems at community level. This form of community practice fills niche between professional and knowledge and skill possessed by agency and policy administrators on one hand and by policy analysts and policymakers on other. Letter grading.

C242. Regional Development, Urbanization, and Industrial 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 development policies. Letter grading.

C243. Community Development and Housing Poli-cies: Roles of State, Civil Society, and Nonprofits. (4) (Same as Social Welfare M290U and Urban Planning M225F.) 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 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.

C244. Transportation Policy and Planning. (4) (Same as Urban Planning M255S.) Lecture, three hours. Introduction to analysis, management, and operation of transportation systems. Topics include evaluation of transportation performance, causes and management of traffic congestion, transportation systems and demand management, complete science research that has informed various areas of LGBT law. Themes include doctrinal and other reasons for legal advancements in past decade, different types of public policy research, limitations of current data and research on LGBT issues, difficulties in translating social science research into evidence in courtroom, impact that dominant LGBT rights frame of equality has on social science research, challenges in conducting objective research, and effective presentation of so-cial science research before legislatures, jur-ies, media, and other audiences. S/U or letter grading.

M260. Foundations of Social Welfare Policy. (4) (Same as Social Welfare M221A and Urban Planning M241.) Lecture, two hours; discussion, one hour; outside study, nine hours. Nature, roles, and history of welfare institutions in different societies; applicable social system theory of different components of welfare system; theory and research about welfare poli-cies and organizational forms. S/U or letter grading.

M261. Aging Policy, Elderly and Families. (4) (Same as Social Welfare M290P.) Lecture, three hours; outside study, nine hours. Designed for graduate students. Examination of theoretical models and con-cerns of policy process and application to aging polici-ty. Analysis of decision-making processes that affect social policies. Description of historical development of contemporary policy. Exploration of current pro-blems and issues. Letter grading.

M266. Advanced Topics in Health Economics. (4) (Same as Health Policy and Management M249E.) Seminar, four hours. Requisites: Health Policy and Management 200A, 200B, M236. Advanced treat-ment of topics related to economic aspects of health care, including mental health economics, pharmaceutical eco-nomics, and relationship between labor supply, wel-fare, and health. Letter grading.

M267. Medicare Reform. (4) (Same as Health Policy and Management M252S.) 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 Medi-care program and to develop specific options for re-forming features of program to accommodate coming pressures generated by retirement of baby-boom generation. Letter grading.

M268. Microeconomic Theory of Health Sector. (4) (Same as Health Policy and Management M236B.) Lecture, four hours; discussion, two hours. Preparation: intermediate microeconomics. Requisites: Biostatistics 100 or equivalent. Economic aspects of health care system, including health manpower substitution, choice of ef-ficient modes of treatment, market efficiency, and competition. Letter grading.

M269. Health Policy and Finance. (4) (Same as Health Policy and Management M269.) Seminar, three hours; outside study, nine hours. Exploration of de-mand for health insurance, policies for public insur-ance (Medicaid and Medicare), uninsured, and health insurance reform. Examination of effects of managed care on health and costs, consumer protection move-ment, and rise of competitive healthcare markets. Let-ter grading.


271. Urban Poverty, Workforce Development, and Public Policy. (4) Lecture, three hours; outside study, nine hours. Limited to graduate students. Examination of factors that lead to low labor market function, particular low-skill labor markets, and exploration of how public and private interventions affect outcomes for disad-vantaged populations. In first half of course, major themes are low-wage work, transport, and education in employment and wages; in second half, employ-
C272. Crisis Decision Making in U.S. Foreign Policy. (4) Lecture, three or four hours; discussion, one hour (when scheduled). In-depth look at theory and practice of U.S. foreign policy-making. Assessment of competing theories and international relations application to specific case studies. Weekly role plays of foreign policymakers and final crisis simulation exercise. Concurrently scheduled with course CM117. Letter grading.

C274. U.S. National Security Policy. (4) Lecture, three hours; outside study, nine hours. Limited 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 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 (Darfur, Afghanistan). Students draft analytic options memos and deliver oral presentations on how to handle six current national security mini-cases. Provides overview of current events, analyzes student analytic options, examines these challenges from strategic policy perspective. Concurrently scheduled with course CM123. Letter grading.

M280A. Research and Development Policy. (4) (Same as Management M292A.) Lecture, three hours. Examination of research and development as process and as element of goal-oriented organization. Factors affecting research and development: transfer of technology; organizational and behavioral considerations; coupling of science, technology, and organizational goals; assessing of and forecasting technological futures. S/U or letter grading.

M280B. 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 nature of and population of firms in existing industries. S/U or letter grading.


M293. Privatization, Regulation, and Public Finance. (4) (Same as Urban Planning M243.) Lecture, three hours; outside study, nine hours. Requisite: course 201. Evaluation of economic and political determinants of trend toward privatizing public services, and equity and efficiency outcomes of this trend as explanations. Letter and S/U grading.

M295. Law and Poor. (4) (Same as Social Welfare M250RT and Urban Planning M254.) Lecture, three hours. Designed for graduate students. Study of major income-maintenance programs in U.S. with emphasis on interaction of moral attitudes toward poor and structure and implementation of law, policy, and administration. Current reform consensus and major reforms. Letter grading.

M296. 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.

M299B. Applied Policy Project III. (6) Seminar, two hours. Preparation: completion of M.P.P. core curriculum, two policy cluster courses, and internship (unless waived). Requisite: course 299A. Second course in three-term sequence in which students prepare major public policy projects and papers that are case studies of policy evaluation and implementation and are equivalent to professional master’s theses. Papers build on prior core courses, internship experience, and policy cluster courses.

299C. Applied Policy Project III. (2) Seminar, two hours. Preparations: completion of M.P.P. core curriculum, two policy cluster courses, and internship (unless waived). Requisite: course 299B. Third course in three-term sequence in which students complete research and report writing for their year-long projects, conduct oral presentations of their applied policy projects, and give written feedback on other student presentations. Letter grading.

375. Teaching Apprentices Pracitcium. (1 to 4) Seminar, to be arranged. Preparation: apprenticeship personnel employment as teaching assistant, associate, or fellow, teaching apprenticeship under active guidance and supervision of regular faculty member responsible for curriculum and instruction at UCLA. May be repeated for credit. S/U grading.


RADIATION ONCOLOGY
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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
David 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, Santa Monica 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 include 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 include total body irradiation before bone marrow transplantation, stereotactic body radiotherapy,
brachytherapy, and stereotactic radiosurgery for A-V malformations, meningiomas, and malignant intracranial lesions. Research interests include clinical trials, radiation biology, radiation modification, molecular biology, immunology, and applied physics. Knowledge of the disease in question, the comparative efficacy of radiation therapy and other methods, radiation biology and pathophysiology, and the physical characteristics of various radiations is essential.

The educational programs serve medical, dental, basic science (biology and physics), nursing, and radiation therapy students, and community and postgraduate physicians; there also is a four-year program for residents who are qualifying for certification in radiation oncology by the American Board of Radiology. For further details on the Department of Radiation Oncology and a listing of the courses offered, see http://radonc.ucla.edu.

For further details on the Department of Radiological Sciences, see http://www.radiology.ucla.edu.

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http://www.religion.ucla.edu/index.php/students/major

Carol A. Bakhos, Ph.D., Chair

Faculty Committee
Carol A. Bakhos, Ph.D. (Near Eastern Languages and Cultures)
Lowell Gallagher, Ph.D. (English)
Naatasha L. Heller, Ph.D. (Asian Languages and Cultures)
Alan F. Roberts, Ph.D. (French and Francophone Studies, World Arts and Cultures/Dance)
Asma Sayeed, Ph.D. (Near Eastern Languages and Cultures)
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
The Study of Religion major is a designated capstone major. Students must complete an advanced seminar that provides unique opportunity to work closely with a faculty member on a focused topic of research. Through their capstone work students are expected to demonstrate their ability to plan and carry out a major project, apply subject matter and research methods knowledge to produce a paper or other research project, and organize information into a coherent and persuasive form for oral presentation to their peers.

Study of Religion B.A.
Capstone Major

Preparation for the Major
Required: Study of Religion M4 or 11, and two courses from Ancient Near East 10W, Anthropology 9, Asian M60, History 1A, 1B, 1C, 9A, 9C, 9D, 9E, M10A, 10B, 11A, 11B, Philosophy 2, 21, Study of Religion M10, M50, M60A through M60E, M60W, M61, M61W.

Transfer Students
Transfer applicants to the Study of Religion major with 90 or more units must complete the following introductory courses prior to admission to UCLA: one history of religions course, one philosophy of religion course, and two courses from sociocultural anthropology, Buddhism, history of Western civilization, Asian civilizations, civilizations of Africa, and history of China.

Refer to the UCLA Transfer Admission Guide at http://www.admissions.ucla.edu/prospect/admissions/ for further details on the Department of Radiological Sciences.

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Chair
Dieter R. Enzmann, M.D. (Leo G. Rigler Professor of Radiological Sciences)

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 the Web-based teaching materials. A longitudinal core clerkship is offered during the third year, with a comprehensive examination. Greater depth of experience is provided by the three weeks of elective clerkship offered to fourth-year medical students that emphasizes training in general diagnostic radiology, angiography/interventional radiology, neuroradiology, and pediatric radiology.

Asma Sayeed, Ph.D.

Refer to the UCLA Transfer Admission Guide at http://www.admissions.ucla.edu/prospect/admissions/ for further details on the Department of Radiological Sciences.
course for preparation for the major and the major must be taken for a letter grade.

Honors Program

The honors program provides exceptional students with an opportunity to do independent research under the tutorial guidance of a faculty member. Students admitted to honors should take three Study of Religion 198 courses under the guidance of the sponsoring professor. The first 198 course should be taken in Spring Quarter of the junior year, the second during the following Fall Quarter, and the third during Winter Quarter of the senior year. The three courses count as part of the regular requirement of 12 upper division courses. The program culminates in an honors thesis.

To qualify for admission students should have a minimum grade-point average of 3.4. The 198 courses designed for the program and the thesis topic should be approved by the committee in charge of the major.

For further information, contact the student affairs officer or the faculty adviser at the program address.

Study of Religion Minor

To enter the Study of Religion minor, students must have an overall grade-point average of 2.0 or better.

Required Lower Division Courses (4 to 10 units):
Study of Religion M4 or 11, or M50 and M60A or M60W.

Required Upper Division Courses (24 to 29 units):

Student are encouraged to select courses that focus on a specific religious tradition or traditions, or on a set of thematic issues important to the study of religion.

A course may be taken twice, on different topics, for credit toward the minor where repetition is allowed by the department offering the course. A maximum of 4 units of special study courses (197, 198, 199) approved by the advisor may be applied toward the minor.

A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor.

Each minor course must be taken for a letter grade, and students must have an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

Study of Religion

Lower Division Courses

M4. Introduction to History of Religions. (5) (Same as History M4.) Lecture, three hours; discussion, two hours. Comparative study of eight major religious traditions, with emphasis on their beginnings and subsequent decisive changes in their respective historical developments and interactions. Equips students with intellectual tools necessary for thinking analytically, empathetically, and comparatively about fascinating human phenomena identified as religious, such as sacred acts, places, words, and persons in their varied historical contexts. Development of student skills in critical thinking, analyzing documents, and making persuasive arguments based on historical evidence. P/NP or letter grading.

M10. Social, Cultural, and Religious Institutions of Judaism. (5) (Same as Jewish Studies M10.) Lecture, three hours; discussion, one hour. Judaism’s basic beliefs, institutions, and practices. Topics include development of biblical and rabbinic Judaism; concepts of god, sin, repentance, prayer, and the messiah; history of Talmud and synagogues of evolution of folk beliefs and year-cycle and life-cycle practices. P/NP or letter grading.

11. Religion in Los Angeles. (4) Lecture, four hours. Introduction to varieties of religious experience in Los Angeles and its environs. Presentations, required readings, and (where possible) site visits to examine selected faiths and spiritual practices throughout Southern California and provide deeper understanding of myriad ways that sacred is made manifest and encountered. Foundational academic orientations within study of religion (anthropological, historical, psychological, and sociological) are used as framework to examine and interpret almost unparalleled religious diversity of City of Angels. Recognizing that spiritual traditions are crucial reflection of region’s ever-changing demographic and historical roles of ethnicity, gender, nationality, and race in shaping of religious landscape. P/NP or letter grading.

M40. Christianities East and West. (5) (Same as Slavic M40.) Lecture, three hours; discussion, one hour. Survey of three major historical branches of Christianity—Eastern and Oriental Orthodoxy, Roman Catholicism, and Protestantism, contrasting how history, dogma, culture, and community structures develop in those three traditions. P/NP or letter grading.

M50. Origins of Judaism, Christianity, and Islam. (5) (Same as Middle Eastern Studies M50B.) Lecture, three hours; discussion, one hour. Examination of three major monotheisms of Western cultures—Judaism, Christianity, and Islam — historically and contemporarily. Development, teachings, and ritual practices of each tradition up to and including medieval period. Comparative study and development of various sacred texts, highlighting key themes and ideas within different historical and literary strata of traditions, such as mechanisms of revelation, struggle for religious authority, and commonalities and differences such as origin of evil and status of nonbelievers. Letter grading.

M60A. Introduction to Buddhism. (5) (Same as Asian M60.) Lecture, three hours; discussion, one hour. Not open for credit to students with credit for course M60W. 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.

M60B. Introduction to Chinese Religions. (5) (Same as Chinese M60.) Lecture, three hours; discussion, one hour. Not open for credit to students with credit for course M61W. Knowledge of Chinese not required. General survey of religious practice in China, with emphasis on everyday religious practice over doctrine, and themes common to Buddhism, Daoism, and Confucianism. P/NP or letter grading.

M60C. Introduction to Korean Religions. (5) (Same as Korean M60.) Lecture, three hours; discussion, one hour. Knowledge of Asian languages not required. General survey of religion in Korea — Shamanism, Buddhism, Confucianism, Daoism, Christianity, Tonghak, and some new religions — with focus on religious doctrines, practices, Korean characteristics, and social impacts. P/NP or letter grading.

M60D. Religion in Classical India. Introduction. (5) (Same as South Asian M60.) Lecture, three hours; discussion, one hour. Introduction to historical development and contemporary practice of religions in Southeast Asia. Examination of indigenous religious beliefs and major textually based religions introduced to region, including Hinduism, Buddhism, Islam, and Christianity. P/NP or letter grading.

M60W. Introduction to Buddhism. (5) (Same as Asian M60W.) Lecture, three hours; discussion, one hour. Enforced requisite: English Composition 3 or 3H or English as a Second Language 36. Not open for credit to students with credit for course M60A. Knowledge of Asian languages not required. General survey of Buddhist worldview and lifestyle, with focus on those religious doctrines and meditative practices most essential to various Asian traditions of Buddhism. Particular attention to problems involved in study of religion. Satisfies Writing II requirement. Letter grading.

M61B. Introduction to Zen Buddhism. (5) (Same as Asian M61.) Lecture, three hours; discussion, one hour. Knowledge of Asian languages not required. Introduction to Zen traditions and to interplay between Zen and other fundamental cultural and religious concerns in East Asia. Topics include role of Zen within Buddhist thought and practice, artistic and literary arts, society, and daily life. Letter grading.

M61W. Introduction to Chinese Religions. (5) (Same as Chinese M61W.) 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 M60B. 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.

Upper Division Courses

101. History of Study of Religion. (4) Lecture, four hours. Recommended requisite: History 4. Survey of major modern theories, methods, and approaches to study of religion to situate them within their own historical, philosophical, and social contexts. Critical consideration of changing and contested meanings of term religion and its relationship to such categories as science and magic, as well as to other domains of social experience. Examination of how study of religion has interacted with other academic fields, especially biblical studies, anthropology, sociology, psychology, and evolutionary biology and psychology. P/NP or letter grading.

105A-M105B-M105C. Baha’i Faith in Iran. (4-4-4) (Same as Islamic M105A-M105B-M105C.) Lecture, three hours. Readings in English. Each course may be taken independently for credit. P/NP or letter grading.
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M106B. Religion and Society in Modern Middle East. (4) (Same as History M106B.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Redefinition of religion in Middle East, emergence of new religious movements, and transformation of religious thinking and function of religion in society. P/NP or letter grading.

M107. Islam in West. (5) (Same as Arabic M107 and Islamics M107.) Lecture, three hours; discussion, one hour. Acquaints students with basic doctrinal and practices of Islam. Survey of history of Islam in West, with focus on U.S. and France. Analysis of issues relevant to growth and development of selected Muslim communities in West. Exposure to diverse expressions of Islam through independent research on Muslim communities and institutions in U.S. Development of strong analytical writing and speaking skills. P/NP or letter grading.

M108. Qur’an. (4) (Same as Arabic M108B.) Lecture, three hours. How Qur’an as scripture shapes Muslim doctrine, rituals, and culture, and how throughout history Muslims have interpreted different applications and implications of Qur’anic passages to accommodate variety of age-old and contemporary issues. Critical evaluation and analysis of contemporary discourses on Islam. Letter grading.

M109. Introduction to Islam. (5) (Same as Islamics M110.) Lecture, three hours; discussion, one hour. Genesis of Islam, its doctrines, and practices, with readings from Qur’an and Hadith; schools of law and theology; piety and Sufism; reform and modernism. P/NP or letter grading.

110. Religion and Society. (4) Seminar, three hours; discussion, one hour. Exploration of capacity of religion to mobilize and legitimate violence. Materials include theoretical texts by Rene Girard, Walter Burkert, Jonathan Z. Smith, and David Raoport and case studies discussing the role of media in forming and expressing religious ideas, practices, and identities. Topics may include representations of religious groups, visual and aural piety, identity formation, interreligious conflict, religious education, and use of media technologies for propaganda or proselytizing purposes. Historical, sociological, and anthropological approaches used in concert with various methodological current within media studies, P/NP or letter grading.

111. Abrahamic Religions: Traditions in Tension. (4) Seminar, three hours. Examination of Abrahamic tradition as received and developed by Jews, Christians, and Muslims according to rubrics of linkage and interaction, with view both to potential clashes in the 21st century and to resources inherent in these traditions for heading off such clashes and misunderstanding. Letter grading.

112. Ancient Egyptian Religion. (5) (Same as Ancient Near East M130.) Lecture, three hours; discussion, one hour. Introduction to religious beliefs, practices, and sentiments of ancient Egypt to study Egyptian religion as coherent system of thought and sphere of action that once served as meaningful and relevant framework for understanding physical and human life for inhabitants of Nile Valley. General principles as well as developments through time (circa 3000 B.C. to 300 C.E.). Topics include mythology; temple and magic; deities, animal, and personal piety. P/NP or letter grading.

113. Bible and Qur’an. (4) (Same as Middle Eastern Studies M133.) Lecture, three hours. Survey of Hebrew Bible/Old Testament, New Testament, and Qur’an to familiarize students with content of scriptures of Judaism, Christianity, and Islam, and socio-cultural background from which these multifarious texts emerged, and to explore major themes and conditions leading to scriptural text. Development of appreciation for role scripture plays in these religious systems and in American culture and society. P/NP or letter grading.

114. Religion in Ancient Israel. (4) (Same as Ancient Near East M135.) Lecture, three hours. Introduces and explores the historiographical and literary sources of the religious traditions of ancient Israel. Emphasis on how these traditions have been reinterpreted both in light of biblical text and through the lenses of various non-textual sources. P/NP or letter grading.

115. Women, Gender, and Religion. (4) Lecture, four hours. Investigation and consideration of roles, status, and representations of women and gender in one or more religious traditions. Examination of how cultural contexts shape gender roles and gender identities (as far as they can be known) for women and men in particular historical periods and how are shaped by these religious traditions, including discussions regarding ritual practices, spirituality, sexual morality, social renunciation, religious authority, marriage and family life, fertility, conceptions of body, public life, and/or literary representations of gender (including those of divine entities) in religious texts, including feminist, literary, historical, sociological, and anthropological. P/NP or letter grading.

115B. Jewish Mysticism, Magic, and Kabbalah. (4) (Same as Jewish Studies M155.) Lecture, three hours. Exploration of types of Jewish mystical thought and practice from Hebrew Bible to medieval Kabbalah and its modern offshoots. P/NP or letter grading.

116. Religion, Film, and Media. (4) Lecture, four hours. Examination of complex relationship between religious traditions and various media (e.g., print, film, photography, television, radio, and electronic) as they have intersected in specific historical and cultural contexts. Use of examples from New Testament, Islam, and Middle East to explore religious ideas, practices, and identities. Topics may include representations of religious groups, visual and aural piety, identity formation, interreligious conflict, religious education, and use of media technologies for propaganda or proselytizing purposes. Historical, sociological, and anthropological approaches used in concert with various methodological current within media studies, P/NP or letter grading.

116A. Chinese Buddhism. (4) (Same as Chinese CM160.) Lecture, three hours; discussion, one hour. Knowledge of Chinese Buddhism is required. Introduction and development of Buddhism in China, interaction between Buddhism and Chinese culture, rise of Chinese schools of Buddhism. Letter grading.

116B. Japanese Buddhism. (4) (Same as Japanese CM160.) Lecture, three hours; discussion, one hour. Knowledge of Japanese Buddhism is required. Development of Buddhism in Japan in its cultural context, with emphasis on key ideas and teachings. Letter grading.

116C. Korean Buddhism. (4) (Same as Korean CM160.) Lecture, three hours; discussion, one hour. Knowledge of Korean Buddhism is required. Development of Buddhism in Korea, interactions between Buddhist traditions of Buddhism, Korean syntheses of imported Buddhist theocological systems and meditative techniques, and independent Son (Zen) schools of Korea. Letter grading.


117B. Shinto, Buddhism, and Japanese Folk Religion. (4) (Same as History M173C.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Social dimension of Japanese folk religions, relationship between indigenous Shinto and Buddhism, and modern Japanese national and cultural traditions. P/NP or letter grading.

117D. Indo-Islamic Interactions, 700 to 1750. (4) (Same as History M174D.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Historical introduction to Muslim communities of what eventually became nations of India, Pakistan, and Bangladesh. Topics include social, political, religious, and cultural history. P/NP or letter grading.

117E. Indo-Islamic Interactions, 1750 to 1950. (4) (Same as History M174E.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Historical introduction to Muslim communities of what eventually became nations of India, Pakistan, and Bangladesh. Topics include social, political, religious, and cultural history. P/NP or letter grading.

117F. Indo-Islamic Interactions, 1750 to 1950. (4) (Same as Middle Eastern Studies M178.) Seminar, three hours. Interdisciplinary approach to some major topics in study of religion, such as religion and science, religion and society, politics, mysticism, ideas of revelation, scripture, myth and religion, worship and ritual. May be repeated for credit with topic change. P/NP or letter grading.

118. Religion and Modern Critical Thought. (4) Lecture, four hours. Requisite: Philosophy 2 or 22. Examination of how various traditions of modern critical thought inform academic study of religion, with primary focus on philosophical analysis of religious belief and practice and its relation to other areas of theoretical discussion, such as philosophy of language, discourse analysis, epistemology, metaphysics, ethics, practice theory, and political theory. Topics may include nature of religious experience and its epistemistic status, embodiment and religious self, difference between knowledge, faith, and doubt, nature and function of religious language, relationship between science and religion, religious belief and standards of rational discourse, theoretical approaches to problems of religious diversity and competing truth claims, formation of religious and secular in modernity. P/NP or letter grading.

119. Ancient Jewish History from Patriarchs to Rabbis. (4) (Same as History M182A and Jewish Studies 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 Crescent and Cross: Jewish Middle Ages. (4) Same as History M182B and Jewish Studies 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.

M184A. Jewish Civilization: Encounter with Great World Cultures. (4) Same as History M184A and Jewish Studies M184A. Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Primary documents, debating contested issues, and knowledge by means of close reading and analysis of primary texts on Jewish social ethics and justice (biblical, rabbinic, medieval, and modern) paired with service learning in Jewish social justice organizations that work with diverse populations in Los Angeles communities. P/NP or letter grading.

M185D. Religions of Ancient Near East. (4) Same as Ancient Near East M185D and History M185D. Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Christian movement from its origins to circa 160 C.E., stressing its continuity/discontinuity with Judaism, various responses to Jesus of Nazareth, writings produced during this period, movement’s encounters with its religious, social, and political world, and methodologies of research. P/NP or letter grading.

M186A. History of Early Christians. (4) Same as History M186A. Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Rich variety in religious practice and thought in the Mediterranean world of 1st C.E. as in context of developing Christian movement. Topics include Pharisees, Qumran, Philo, Stoics, Epicureans, traditional Greek and Roman religions, mysteries, astrology, magic, gnosticism, and emperor-worship. P/NP or letter grading.

M186C. Jesus of Nazareth in Historical Research. (4) Same as History M186C. Lecture, three hours; discussion, one hour (when scheduled). Recommended for juniors/seniors. Stimulated by significant post-Enlightenment historical evaluations, students are led into firsthand knowledge in (translation) of various multilayered sources for the sociopolitical, economic, political, and religious contexts. P/NP or letter grading.

M188L. Applied Jewish Studies and Social Ethics. (4) Same as History M188SL and Jewish Studies M188SL. Lecture, three hours; fieldwork, two hours. Introduction to history, theory, and practice of applied Jewish studies. Analysis of historical and contemporary texts on Jewish social ethics and justice (biblical, rabbinic, medieval, and modern) paired with service learning in Jewish social justice organizations that work with diverse populations in Los Angeles communities. P/NP or letter grading.

191. Variable Topics Research Seminars: Study of Religion. (4) Seminar, four hours. Preparation: completion of preparation for major courses and at least half of upper division courses required for major (including theory and method courses). Designed for seniors. Seminar on central method or/and theme in study of religion. Refinement and integration of this knowledge by means of close reading and analysis of primary documents, debating contested issues, and researching and writing original paper. P/NP or letter grading.


199. Directed Research in Study of Religion. (2 to 4) Tutorial, one hour. Limited to juniors/seniors. Supervised individual research under guidance of advisor or mentor. Culminating paper or project required. Twelve units may be applied toward major. Individual contract required. Letter grading.

**ROTSC Program – Aerospace Studies**

**College of Letters and Science**

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**Scope and Objectives**

In accordance with the National Defense Act of 1920 and with the original charter 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/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/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.

**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, 2A, 2B, 3A, 3B, 3C, and 4A), 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, survival 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
Aerospace Studies

Lower Division Courses

Freshman-Year Courses

A. Leadership Laboratory. (No credit) (Formerly numbered Z) 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 a framework of organized cadet corps. As integral part of aerospace studies curriculum, provides experiences designed to develop leadership potential and serves as orientation to active duty. P/NP grading.

1A-1B-1C. Foundation of U.S. Air Force. (2-2-2) Lecture, one hour. Survey course designed to introduce students to U.S. Air Force and Air Force Reserve Officers’ Training Corps. Topics include mission and organization of Air Force, officerhood 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 Air and Space Power. (2-2-2) Lecture, one hour. Historical survey of air and space power designed to motivate students to transition from Air Force ROTC cadet to officer candidate. Featured topics include Air Force heritage and leaders; introduction to air and space power through examination of competencies, functions, and doctrines; and continued application of communication skills. P/NP or letter grading.

Upper Division Courses

130A-130B-130C. Air Force Leadership Studies. (4-4-4) Lecture, three hours. Requisites: courses 1A, 1B, 1C, 20A, 20B, 20C. Study of leadership and quality management fundamentals, professional knowledge, Air Force doctrine, leadership ethics, and communication skills required of Air Force junior officers. Use of case studies to examine Air Force leadership and management situations as means of demonstrating and exercising practical application of concepts being studied. P/NP or letter grading.

140A-140B-140C. National Security Affairs/Preparation for Active Duty. (4-4-4) Lecture, three hours. Requisites: courses 1A, 1B, 1C, 20A, 20B, 20C. Study of national security processes, regional studies, advanced leadership ethics, and Air Force doctrine. Special topics focus on military as profession, officership, military justice, civilian control of military, preparation for active duty, and current issues affecting military professionalism. Within this structure, continued emphasis on refining communication skills. P/NP or letter grading.

197. Individual Studies in Aerospace Studies. (2 or 4) Tutorial, three hours. Limited to juniors/seniors. Individual intensive study, with scheduled meetings to be arranged between faculty member and student. Assigned reading and tangible evidence of mastery of subject matter required. May be repeated for credit. Individual contract required. P/NP or letter grading.

ROTC Program—Military Science

College of Letters and Science

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Jennifer A. Valdivia, M.A., Major

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/ Marine Corps, or Air Force while completing their college education. The ROTC curriculum is 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.goarmy.com/rotc.html, by calling (310) 825-7381, or by e-mail to armyrotc@milsic.ucla.edu. Completed four-year applications should be submitted by January 10 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 Reserves, 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 action courses. Non-ROTC students may enroll in many of the military science courses without enrolling in the ROTC program.

Additionally, students who decide to become Army officers can receive summer training in military parachuting (Airborne School at Fort Benning, GA), helicopter operations that include rappelling from a hovering helicopter (Air Assault School in Hawaii), and mountaineering operations (Northern Warfare School in Alaska).

Scholarships are available for two, three, and four years of academic study and are awarded on a competitive basis. Army Scholarships pay for full tuition and mandatory fees or housing, up to $10,000, and provide a tiered stipend ranging from $3,000 to $5,000 per year and a $1,200 book allowance. Non-scholarship, contracted ROTC cadets also receive the tiered stipend of $3,000 to $5,000 per year. Students in the program also compete for over $50,000 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
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 enroll in 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 ROTC scholarships and enter the Active Army. The active duty obligation for those students commissioned into the Active Army is three years. Students who accept their commission to enter the Reserves or National Guard is for initial training, and only for a period selected to enter the Reserves or National Guard, completing two years of collegiate training (junior and senior years), students are required to execute a contract with the Department of the Army agreeing to complete the Advanced Course and accept a commission if offered.

The active duty obligation for those students commissioned into the Active Army is three years. Students who accept ROTC scholarships and enter the Active Army serve one additional year. ROTC students wishing to obtain certain advanced degrees may be granted a delay in reporting to their initial assignment.

Four-Year Program
Students are enrolled in the Basic Course (freshman and sophomore years) on a voluntary basis. After completion of the Basic Course and before entrance into the Advanced Course (junior and senior years), students are required to execute a contract with the Department of the Army agreeing to complete the Advanced Course and accept a commission if offered.

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 Officerhood. (2) Lecture, one hour. Introduction to issues and competencies that are central to commissioned officer’s responsibilities. Framework to understand officerhood, leadership, military customs, briefings, and life skills such as physical fitness, nutrition, and time management. P/NP or letter grading.

12. Basic Military Leadership. (2) Lecture, one hour. Requisite: course 11. Introduction to fundamentals of leadership, Army leadership values, ethics, and counseling techniques. Foundation of basic leadership fundamentals central to commissioned officers’ 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 coordinate 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 guerilla strategies: explanation/discussion of political, economic, religious, social, and psychological factors contributing to civil unrest and/or insurgencies. Topics include non-military responses, military tactics, interaction 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


131. Tactical Planning and Analysis. (4) Lecture, three hours; laboratory, four hours. Introduction to leadership development process used to evaluate military leadership performance. Examination of how to conduct individual and small unit training as well as introduction to basic principles of tactics. Emphasis on study of reasoning skills, troop leading procedures, and military orders process. P/NP or letter grading.

132. Army Officerdom and Communication. (4) Lecture, three hours; laboratory, four hours. Examination of officerdom that culminates in detailed case study. Interpersonal communications, with focus on general communication theory as well as written and spoken communication skills. Presentation of information briefing to receive feedback from both instructor and fellow students. P/NP or letter grading.

133. Leadership and Problem Solving. (4) Lecture, three hours; laboratory, four hours. Examination of role communications, values, and ethics play in effective leadership, including ethical decision making, consideration of others, transactional and transformational leadership, and survey of Army leadership doctrine. Emphasis on improving oral and written communication abilities and leadership development and assessment. P/NP or letter grading.

141. Leadership and Management. (4) Lecture, three hours; laboratory, four hours. Interactive course to develop student proficiency in planning and executing complex training operations. Counseling techniques and development of skills needed to lead various organizations. Exploration of training management, leadership skills, and developmental counseling techniques.

142. Leadership, Ethics, and Military Law. (4) Lecture, three hours; laboratory, four hours. Interactive course to enhance student understanding of organizational culture, leadership, and 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. Officerdom: Professional Military Leadership. (4) Lecture, three hours; laboratory, four hours. Capstone interactive leadership course to prepare students for challenges of being commissioned officers in the 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, maintenance management, 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. Assessed reading and tangible evidence of mastery of subject matter required. May be repeated for credit. Individual contract required. P/NP or letter grading.
**Scope and Objectives**

In accordance with the National Defense Act of 1920 and with the concurrence of The Regents of the University, a part 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/ 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.

All three ROTC departments offer voluntary four- and three-year programs for freshmen and sophomores. The Army and Navy/ Marine Corps also offer a two-year program for current and transfer students. All have leadership laboratories that teach leadership and management skills. Active duty obligation following commissioning varies depending on branch of service and designated career field or occupational specialty.

**Scholarships**

ROTC Scholarships are awarded on a competitive basis to U.S. citizens regardless of parents’ income. Scholarships provide tuition, a book allowance, fees, and a tax-free monetary allowance between $250 and $400 per month during the academic year. Applications for scholarships may be obtained at https://www.nrotc.navy.mil or by calling (800) 628-7682. Completed applications should be submitted prior to August 15 for early consideration and no later than January 31 for the fall term. Two-year scholarship applications may be obtained from the UCLA Naval Science Department and are considered when received.

Navy/Marine Corps ROTC Program

The Department of Naval Science provides professional training for students leading to an active duty commission at graduation in the U.S. Navy or Marine Corps. Through the Naval Reserve Officers’ Training Corps (NROTC), scholarship students receive full tuition, fees, books, and subsistence pay of $250 to $400 per month. 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 an active duty commission at graduation. Because of the rapid development of highly technical ship systems, aviation, and other military equipment, science and engineering majors are highly desirable; however, Navy/Marine Corps Scholarships are currently available to students pursuing any major offered by the University, as long as they agree to complete basic technical requirements. In addition to University requirements, Navy option midshipmen must complete 26 units and Marine Corps 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 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 January 31 each year. In addition to tuition, fees, and uniforms, students receive subsistence pay of $250 to $400 per month and a book stipend. Scholarship students are obligated to serve on active duty for a minimum of four to five years following graduation and commissioning.

College Program (Nonscholarship)

Students attending the University who meet Navy/Marine Corps requirements but who do not have an NROTC Scholarship may enroll in the College Program during their freshman year. These students have the opportunity to compete for scholarships after the completion of one term of naval science courses. If they do not win a scholarship, or choose not to compete for one, they must compete for advanced standing prior to their junior year. A two-year College Program is also available to students who have not yet started their junior year. Students enter the two-year program with advanced standing after selection through national competition and completion of a six-week summer training period. Applications for the two-year program are due March 1 of the sophomore year. All College Program students receive uniforms, naval science textbooks and, once selected for advanced standing, monthly subsistence pay in their junior and senior years.

**Marine Corps Option**

Highly motivated NROTC students may request designation as Marine Corps option students and may also pursue any UCLA academic degree. The final summer cruise involves intensive Marine training. Marine Corps option students also participate, on a limited basis, in field training exercises during the academic year.

**Naval Science Minor**

The Undergraduate Council of the UCLA Academic Senate voted to discontinue the Naval Science minor effective Fall Quarter 2013. Students already in the minor have until the end of Spring Quarter 2014 to complete the requirements.

The Naval Science minor is designed for students who wish to augment the major they are completing in another departmental program. Naval science courses are open to all students with an interest in history, national security, foreign policy, organizational leadership, management, ethics, and the military sciences. To enter the minor, students must have an overall grade-point average of 2.0 or better. For further information, contact Donna Tenerelli at (310) 825-9075.

**Required Lower Division Courses (11 units):**

- Naval Science 1B, 20A, 20B.

**Required Upper Division Courses (20 units):**


A minimum of 20 units applied toward the major requirements must be in addition to units applied toward major requirements or another minor.

Each minor course must be taken for a letter grade, with a grade-point average of 2.5 or better in each. Successful completion of the minor is indicated on the transcript and diploma.

**Naval Science Lower Division Courses**

A. Naval Science Laboratory. (No credit) Laborato-
y, 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 Sci-
ence ROTC midshipmen. Provides midshipmen with general military training and practical command and staff leadership experiences through classroom instruction and performance of various tasks and interactive processes within framework of organized midshipmen-run military unit, with oversight by active-duty military staff. As integral part of naval science
curriculum, provides professional experiences designed to develop leadership potential and orientation for active duty. No grading.

1A. Introduction to Naval Science. (3) Lecture, three hours. Introduction to organization of Naval Service, various components of Navy, career opportunities, shipboard damage control, fire fighting, Naval and Marine Corps operations, and some customs and traditions of Naval Service. Letter grading.

1B. Naval Operations and Seamanship. (3) 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 applicability to the junior military officer’s role as a leader/manager. Topics include managerial functions, performance appraisal, motivation theories, group dynamics, leadership theories, and communication.

102C. Naval Leadership and Ethics. (2) Lecture, two hours. Requisite 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, Korea, Beirut, and Grenada. Examination of contemporary doctrine through study of recent operations.

107. 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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James R. Massengale, Ph.D.
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Assistant Professor

Arne O. Lunde, Ph.D.

Lecturer

Patrick J. Wen, Ph.D.

Adjunct Assistant Professor

Zoe P. 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 literature, language, 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 the other language areas. 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 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 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:** 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, 147A, C147B, (3) literary periods — Scandinavian 152, 155, 156, 157, (4) Scandinavian cinema — Scandinavian 161, C163A, C166A, 166C, (5) cultural studies — Scandinavian C171, C174A, 174B, 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.

A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor.

Each minor course must be taken for a letter grade, and students must have an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.
Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website, http://grad.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 Degree

The Scandinavian Section offers the M.A. degree in Scandinavian.

Scandinavian

Lower Division Courses

1. Elementary Swedish. (4) Discussion, four hours. P/NP or letter grading.
6. Elementary Swedish: Intensive. (12) Discussion, 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.
7. Elementary Norwegian. (4) Discussion, four hours. P/NP or letter grading.
28. Heroic Journey in Northern Myth, Legend, and Epic. (4) Lecture, three hours. Not open for credit to students with credit for course 40W. All readings in English. Comparison of journeys of heroes. Readings in mythology, legend, folklore, and epic, including Nibelungenlied, Volsunga saga, Eddas, and Beowulf. Cultural and historic backgrounds to texts. P/NP or letter grading.
29. Intermediate Old Norse. (4) Lecture, three hours. Enforced requisite: English Composition 3 or English as a Second Language 36. Not open for credit to students with credit for course 50. Designed for students in general and for those wishing to prepare for more advanced and specialized studies in Scandinavian literature and culture. Selected works from literatures of Denmark, Norway, Sweden, Iceland, and Finland, ranging from myth, national epic, saga, and folklore through modern novel, poem, play, short story, and film, read in English and critically discussed. Satisfies Writing II requirement. Letter grading.
30. Introduction to Scandinavian Literatures and Cultures. (5) Lecture, three hours; discussion, one hour. Enforced requisite: English Composition 3 or 3H or English as a Second Language 36. Not open for credit to students with credit for course 50. Designed for students in general and for those wishing to prepare for more advanced and specialized studies in Scandinavian literature and culture. Selected works from literatures of Denmark, Norway, Sweden, Iceland, and Finland, ranging from myth, national epic, saga, and folklore through modern novel, poem, play, short story, and film, read in English and critically discussed. Satisfies Writing II requirement. Letter grading.
31. Scandinavian Mythology. (4) Seminar, three hours. Overview of major gods and goddesses, heroes and heroines, narratives and adventures that make up lore collectively referred to as Scandinavian, or Norse, myth. Reading and examination of this lore that is chiefly preserved in two collections traditionally called Poetic or (Elder) Edda and Prose or (Younger) Edda. P/NP or letter grading.
33. Advanced Finnish. (4) Lecture, three hours; discussion, one hour. Survey of history, anthropology, and archaeology of Viking Age society. Readings draw on medieval sagas as well as secondary material, focus on impor- tance of financial support to northern Europe, and consider ways in which European and Scandinavian societies evolved in response to Viking incursions. P/NP or letter grading.
34. Theory of Scandinavian Novel. (4) Seminar, three hours. Analysis of predominant structures of Scandinavian novel from its 18th-century beginnings through its rise in 19th century and its 20th-century evolution. Discussion of application of contemporary critical theories to novels. May be concurrently scheduled with course C241A. P/NP or letter grading.
35. Nordic Poetry. (4) Seminar, three hours. Readings in English translation. Survey of Nordic poetry from Middle Ages to present, including works of 13th-century Iceland, Scandinavian ballad tradition, some folk poetry from Finland's national epic Kaleva, and modern lyric. Reading of essays on translating poetry and consideration of associated problems. Poetry presents for translators, as well as what is lost and/or gained in translation. Study of poetry within following contexts: role(s) poetry has served in Nordic societies from 8th century to present day; Nordic poets' influences from and contributions to European literary movements; and special status of poetry in preserving small national languages and literatures, as indicated by financial support to national small languages and publishers of contemporary poets and their poetry. P/NP or letter grading.
36. Short Story in Scandinavia. (4) Seminar, three hours. Exploration of range of classic short story and novella texts from Scandinavian literary canon, with stories by authors such as Hans Christian Andersen, Jens Peter Jacobsen, Alexander Kielland, Arnlí Skarr, Sigbjørn Obstfelder, Knut Hamsun, Isak Dinesen, and Ruben Palm. Examination of authors 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.
37. Introduction to Nordic Theater and Drama. (4) Lecture, three hours. Examination of artistic legacy of Henrik Ibsen and August Strindberg in context of emergence of modern Nordic theater and drama as whole, as well as important contributions of their contemporaries and successors. Readings include plays, letters, speeches, and memoirs by Ludvig Holberg, Henrik Ibsen, August Strindberg, Pär Lagerkvist, Kjeld Abell, Eeva-Liisa Manner, Hrannfrid Hakalin Grundmannsdottir, and Jonas Hassan Khemiri. P/NP or letter grading.
38. Scandinavian Crime Literature. (4) Seminar, three hours. Introduction to background and fiction as well as its related to Scandinavian, or Norse, myth. Reading and examination of this lore that is chiefly preserved in two collections traditionally called Poetic or (Elder) Edda and Prose or (Younger) Edda. P/NP or letter grading.
39. Voices of Women in Nordic Literature. (4) Seminar, three hours. Readings and discussion of selected plays by Henrik Ibsen, may be concurrently scheduled with course C247. P/NP or letter grading.
40. Heroic Journey in Northern Myth, Legend, and Epic. (4) Lecture, three hours; discussion, one hour. Enforced requisite: English Composition 3 or English as a Second Language 36. Not open for credit to students with credit for course 40. All readings in English. Comparison of journeys of heroes. Readings in mythology, legend, folklore, and epic, including Nibelungenlied, Volsunga saga, Eddas, and Beowulf. Cultural and historic backgrounds to texts. P/NP or letter grading.
P/NP or letter grading. May be concurrently scheduled with course C247B. P/NP or letter grading.

147A. Hans Christian Andersen. (4) A critical, hour-by-hour study of the works of one of the world’s most influential storytellers. Readings of major works in both their original and English versions. P/NP or letter grading.


152. Backgrounds of Scandinavian Literature. (4) Seminar, three hours. Readings and discussion of representative works from the major literary traditions of the Nordic countries, including Iceland and the Faroe Islands. 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 from Romantic period to the present. P/NP or letter grading.

156. Scandinavian Literature of 20th Century. (4) Seminar, three hours. Readings and discussion of selected works by Norwegian, Swedish, Danish, and Icelandic authors. Intended for those preparing for more advanced studies in Scandinavian literature. P/NP or letter grading.


165. Scandinavian Literature of 19th Century. (4) Seminar, three hours. Readings and analysis of selected texts by major 19th-century Swedish authors. P/NP or letter grading.

166A. Ingmar Bergman. (4) Seminar, three hours. Examination of Ingmar Bergman’s development as a film director through his major works, including early silent films, documentary, and experimental films. P/NP or letter grading.

166C. Carl Dreyer. (4) Seminar, three hours. Readings of Dreyer’s own writings on cinema. All films have English subtitles. Concurrently scheduled with course C266A. P/NP or letter grading.

C171. Introduction to Scandinavian Folklore. (4) Seminar, three hours. Introduction to fairy tales and legends of Scandinavian tradition as well as interpretive methodologies that strive to answer questions like: Why do people tell stories that they tell? Concurrently scheduled with course C271. Letter grading.

173A. Popular Culture in Scandinavia. (4) Seminar, three hours. Examination of popular culture in Scandinavia through study of contemporary Scandinavian literature, film, music, and popular culture. Questions include: How are cultural expressions interpreted by different audiences? How do cultural expressions change over time? P/NP or letter grading.

174A. Minority Cultures in Scandinavia. (4) Seminar, three hours. Exploration of emergence of immigrant cultures in Nordic region. Beginning in 1960s, large numbers of people from Turkey, Italy, and Pakistan began immigrating to Nordic countries, followed in subsequent decades by refugees and asylum seekers from Vietnam, India, Iraq, Afghanistan, Cambod- dia, and countries of Africa. Social and 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 production in wide range of cultural expressive media, including literature, film, and visual and performing arts. Exploration of emergence of new forms of Norwegian languages, as well as well-documented phenomenon of Ricky Sweden. Concurrently scheduled with course C274A. P/NP or letter grading.

174B. Queer Scandinavia. (4) Seminar, three hours. Queer thematic in Scandinavian literature, mainly from 19th and 20th centuries. Scandinavian countries have had more progressive view on homosexuality than most other countries, and Scandinavian writers portrayed homosexuality in explicit and radical ways as early as turn of 19th century. Introduction to key theoretical works within field of gay and lesbian studies and queer studies, as well as overview of historical, legal and social realities of how homosexuality has been perceived in Western world over time. P/NP or letter grading.

175. Introduction to Sami Language and Culture. (4) Lecture, three hours. Use of thematically arranged, structurally graduated readings, conversation topics, individual and group assignments, and journal writing to provide systematic overview of linguistic characteristics of Sami language. May be repeated for credit as determined by undergraduate adviser with student consent.

C175. Introduction to Sami Language and Culture. (4) Lecture, three hours. Use of thematically arranged, structurally graduated readings, conversation topics, individual and group assignments, and journal writing to provide systematic overview of linguistic characteristics of Sami language. May be repeated for credit as determined by undergraduate adviser with student consent.

187FL. Special Studies: Readings in Scandinavian. (4) Seminar, three hours. Examination of a chosen topic in Scandinavian literature. May be repeated for credit as determined by undergraduate adviser with student consent.

187FL. Special Studies: Readings in Scandinavian. (4) Seminar, three hours. Examination of a chosen topic in Scandinavian literature. May be repeated for credit as determined by undergraduate adviser with student consent.

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. Limited to juniors/seniors. Supervised independent research investigation under guidance of faculty mentor. Culminating paper or project required. May be repeated for credit. Individual contract required. P/NP or letter grading.

199. Directed Research in Scandinavian. (4) Tutori- al, three hours. Limited to juniors/seniors. Supervised independent research investigation under guidance of faculty mentor. Culminating paper or project required. May be repeated for credit. Individual contract required. P/NP or letter grading.

Graduate Courses

C231. Introduction to Viking Age. (4) Lecture, three hours. History, society, and culture of early Scandinavians. All texts in English, including readings in Old Norse sagas and Eddas. Concurrently scheduled with course C131. Graduate students do additional readings and write more extensive research papers. Letter grading.

C233A. Saga. (4) Seminar, three hours. Sagas are largest extant medieval prose literature. Texts in En- glish, with selections from different types of Icelandic sagas. Consideration of history and society that pro- duced these narratives. Concurrently scheduled with course C133A. Graduate students do additional read- ings and write more extensive research papers. Letter grading.

C23B. Advanced Old Norse Prose. (4) Lecture, three hours. Requisite: course 132B. Readings of major saga texts. Also, secondary sources that bear on spec- ific issues in Old Norse literature. Topics in medieval Scandi- navian history. S/U or letter grading.


C237. Old Norse Literature and Society. (4) Seminar, three hours. Critical issues in medieval Scandinavian studies. May be repeated for credit. Concurrently scheduled with course C137. Graduate students do additional readings and write more extensive research papers. Letter grading.

C241A. Theory of Scandinavian Novel. (4) Seminar, three hours. Preparation: advanced knowledge of one Scandinavian language. Discussion 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 novels. May be concurrently 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.

C244A. Voices of Women in Nordic Literature. (4) 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) Seminar, three hours. Preparation: advanced knowledge of one modern Scandinavian language. Readings and discussion of selected works by Knut Hamsun and other 19th- and 20th-century Scandinavian writers who explored themes 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. Arne Strindberg. (4) Seminar, three hours. Preparation: advanced knowledge of one Scandinavian language. Reading and discussion of selected works by August Strindberg. May be concurrently scheduled with course C146A. 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.

C247B. Soren Kierkegaard. (4) Seminar, three hours. Preparation: advanced knowledge of one modern Scandinavian language. Readings and discussion of selected works by Soren Kierkegaard and other existentialist writers. May be concurrently scheduled with course C147B. S/U or letter grading.

C253A. Introduction to Danish Cinema. (4) Seminar, three hours. Introduction to history of cinema in Denmark, as well as to some fundamental concepts in study of film. Deliberately broad and historically centered approach to development of cinema in Denmark rather than of particular director or topics. Theoretical readings from important critics, including Kracauer, Bazin, Metz, and Chatman, along with several directed exercises, to develop vocabulary and critical methods for discussing films in general and Danish cinema in particular. Other readings include selections from Hjort, Sandberg, Tangerlini, and other Scandinavian theorists. Concurrently scheduled with course C163A. S/U or letter grading.

C262B. Introduction to Swedish Cinema. (4) Lecture, three hours. Introduction to and exploration of history of Swedish cinema. To present filmmakers include auteurs in international canon, such as Victor Sjöström, Mauritz Stiller, and Ingmar Bergman, as well as other key Swedish filmmakers such as Gustaf Molander, Alf Sjöberg, Mai Zetterling, Vilgot Sjöman, Jan Troell, Lukas Moodyson, and Jor- sef Fares. 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 C163B. 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. Filmmakers include Tancred Ibsen, Arne Skbuen, Edith Carlmar, Niels Gaup, Erik Skjoldbjarg, Bent Hamer, Khalid Hussain, and Petter Naess. Partic- ular focus on popular genres such as war films, horror, noir, romantic comedies, and documentaries. Concurrently scheduled with course C163C. S/U or letter grading.

C265. Seminar: Scandinavian Literature. (4) Seminar, three hours. Preparation: reading knowledge of a Scandinavian language. Selected topics in Scandina- vian prose, poetry, and drama. May be repeated 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 1970s. Focus on work of this most personal of filmmakers within multiple frameworks of postwar Swedish film industry, international art cine- ma movement, and issues of auteur filmmaking. Course readings and viewing of 10 Bergman films. All films have English subtitles. Concurrently scheduled with course C166A. S/U or letter grading.


C271. Introduction to Scandinavian Folklore. (4) Seminar, three hours. Preparation: advanced knowledge of one modern Scandinavian language. Introduction to fairy tales and legends of Scandinavian tra- dition as well as to interpretive methodologies that strive to answer question why do people tell stories that they tell. Concurrently scheduled with course C171. Letter grading.

M271. Study of Oral Tradition: History and Meth- ods. (Same as English M205A.) 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 ori- gins of vernacular literatures, European romantic re/discovery of oral tradition, 20th-century heuristic models of oral composition, and modern-day elec- tronic media and popular verbal genres, such as jok- ing and rapping. S/U or letter grading.

M272. Collecting Oral Tradition. (Same as Eng- lish M205B) Seminar, three hours. Description and evaluation of various modern approaches to collect- ing and documenting oral tradition as text, perfor- mance, and sociocultural event. Consideration of ap- proaches ranging from written transcription and tex- tualization to audio and video presentation. S/U or letter grading.

M273. Studies in Oral Traditional Genres. (Same as English M205C) Seminar, three hours. Exploration in development of scholarship on a particular oral traditional genre (e.g., ballad, song, epic, proverb, riddle, folk tale, legend) or a set of closely related oral traditional genres. S/U or letter grading.

C274A. Minority Cultures in Scandinavia. (4) Semi- nars, three hours. Exploration of emergence of immi- Grant the study or research. May be repeated once. May not be applied toward M.A. minimum course re- quirements. S/U grading.

C275. Introduction to Sami Language and Culture. (4) Lecture, three hours. Introduction to a grammatically arranged, structurally graduated readings, conversation topics, individual and group assignments, and journal writing to provide systematic overview of linguistic character- istics of Estonian language. At course end students should be able to communicate in Sami in variety of common social situations and should be equipped with necessary basic concepts to continue language acquisition and cultural studies in their society and professional milieu, interacting with native speakers, or taking formal courses at intermediate level. Concurrently scheduled with course C175. S/U or letter grading.

C280. Literature and Scandinavian Society. (4) Seminar, three hours. Designed for graduate students. Discussion of selected aspects of Scandinavia- nian society based on readings of contemporary liter- arture as well as historical and/or sociological material. May be repeated for credit (as determined by gradu- ate adviser) with topic change. May be concurrently scheduled with course C180. Graduate students may enroll for extra seminar hour and write research papers of greater length and depth. S/U or letter grading.

375. Teaching Apprentice Practicum. (1 to 4) Seminar, three hours. Preparation: Ph.D. student in personnel employment as teaching assistant, associate, or fellow. Teaching apprenticeship under active guid- ance and supervision of regular faculty member re- sponsible for curriculum and instruction at UCLA. May be repeated for credit. S/U grading.

596. Directed Individual Study or Research. (2 to 6) Tutorial, to be arranged with faculty member who directs the study or research. Limited to graduate Scandinavian students. Twelve units may be applied toward total course requirement, but only 4 units may be applied toward minimum graduate course require- ment. May be repeated twice. S/U or letter grading.

597. Preparation for M.A. Comprehensive Exam- inations and/or Ph.D. Qualifying Examinations. (4 to 8) Tutorial, to be arranged with faculty member who directs the study or research. May be repeated once. May not be applied toward M.A. minimum course re- quirements. S/U grading.

599. Research for and Preparation of Ph.D. Disser- tation. (4) Tutorial, to be arranged with faculty mem- ber who directs the study or research. May be repeat- ed. S/U grading.

SCIENCE EDUCATION

Interdisciplinary Minor
College of Letters and Science

UCLA
1037 Young Hall
Box 351569
Los Angeles, CA 90095-1569
(310) 794-2191
e-mail: CaTeach@chem.ucla.edu
A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor, and at least 16 units must be taken in residence at UCLA.

Each minor course, except Science Education 105SL, must be taken for a letter grade, with a grade of C or better in each, and students must have an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

Science Education

Lower Division Courses

1SL. Classroom Practices in Elementary School Science. (2) (Formerly numbered Life Sciences 715SL.) Seminar, 90 minutes; fieldwork, three hours per week for eight weeks. Introduction for prospective science teachers to field of elementary education and teaching and learning of science in elementary school classrooms. Pairs of students are placed in local elementary school classrooms to observe, participate, and assist mentor teachers in instruction. Introduction to inquiry-based learning practices, national and California standards, reading and learning differences in children, and cognitive ability of elementary-age children as it relates to introduction of concepts, curricular planning, classroom management, and learning assessment. P/NP grading.

10SL. Classroom Practices in Middle School Science. (2) (Formerly numbered Life Sciences 725SL.) Seminar, 90 minutes; fieldwork, three hours. Enforced requisite: course 1SL. Introduction for prospective science teachers to field of secondary education and teaching and learning of science in middle school classrooms. Pairs of students are placed in local middle school classrooms to observe, participate, and assist mentor teachers in fieldwork. Discussion of learning in middle school culture, cognitive development of students at this level, and best means to teach appropriate science concepts at this level. P/NP grading.

Upper Division Course

100SL. Classroom Practices in High School Science. (3) Seminar, three hours; service learning fieldwork, three hours. Enforced requisite: course 105SL. Discussion of learning for prospective science teachers to field of secondary education and teaching and learning of science in high school classrooms. Pairs of students are placed in local high school classrooms to observe, participate, and assist mentor teachers in instruction. Discussion of learning in high school culture, cognitive development of students at this level, and best means to teach appropriate science concepts at this level. Letter grading.
Undergraduate Study

The department offers three majors: (1) Central and East European Languages and Cultures, (2) Russian Language and Literature, and (3) Russian Studies. The equivalent of a major in Central and East European Languages and Cultures 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 Cultures or Russian Language and Literature who intend to pursue graduate study in this 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.

The three majors offered in the department are designated capstone majors. Students majoring in Central and East European Languages and Cultures, Russian Language and Literature, and Russian Studies must complete a capstone seminar and present their final paper in the department’s annual Undergraduate Research Conference. Students draw on their previously acquired subject matter knowledge and skills to plan a research project and write a substantial academic paper. They also gain experience engaging in scholarly discourse, preparing appropriate media for public presentation, and submitting their work to an academic journal.

Central and East European Languages and Cultures B.A.

Capstone Major

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


During their senior year, students must also take Slavic 191T in which they complete a capstone senior thesis.

Students may petition to substitute courses after consulting with the undergraduate adviser. Each major course must be taken for a letter grade, and students must have an overall grade-point average of 2.0 or better.

Russian Language and Literature B.A.

Capstone Major

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/adm_tr.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 capstone senior thesis.

Students may petition to substitute courses after consulting with the undergraduate adviser. Each major course must be taken for a letter grade, and students must have an overall grade-point average of 2.0 or better.

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 courses selected from 119, 120, 121, 129, 130A, 130B, 130C, 140A through 140D; and (3) two additional Russian language and/or literature courses selected from 102A, 102B, 102C, 103A, 103B, 103C, 107A, 107B, 107C, 108, M118, 122, 124C, 124D, 124G, C124N, 124P, 124T, M127, Slavic CM114.

During their senior year, students must also take Slavic 191T in which they complete a capstone senior thesis.

Students may petition to substitute courses after consulting with the undergraduate adviser. Each major course must be taken for a letter grade, and students must have an overall grade-point average of 2.0 or better.
Slavic Languages and Literatures / 607

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, one course from 25, 25W, 30, 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 164, Political Science 128A, 128B, 156A.

Students may petition to substitute courses after consulting with the undergraduate adviser.

A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor.

Each minor course must be taken for a letter grade, and students must have an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

Graduate Study
Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website, http://grad.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 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 recommended preparation for 101B, which is recommended preparation for 101C. Each course may be waived with consent of instructor. 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.

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 Ukrainian 101A, 101B, 101C (students who demonstrate sufficient fluency in one of these languages through departmental testing are exempt from this three-course sequence and 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, Gender Studies M166, 185, History 120A through 120D, 130A, 130B, Polish 152A, 152B, 152C, Political Science 156B, 156D, Romanian 152, Russian 124G, Slovak 125, 179, Sociology M166, or Ukrainian 152; (3) 12 units of second-year or higher-level language courses to be selected from Czech 102A, 102B, 102C, 187A through 187M, Hungarian 102A, 102B, 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, Gender Studies M166, 185, History 120A through 120D, 130A, 130B, Political Science 156B, 156D, Romanian 152, Russian 124G, Slavic 125, Sociology M166, Ukrainian 152.

With approval of the undergraduate adviser, other related upper division courses may be applied toward the minor.

A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor.

Each minor course must be taken for a letter grade, and students must have an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

Russian Language Minor
To enter the Russian Language minor, students must have an overall grade-point average of 2.0 or better.

Required Lower Division Courses (9 to 17 units): 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.

A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor.

Each minor course must be taken for a letter grade, and students must have an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

Russian 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, 30, 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.

A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor.

Each minor course must be taken for a letter grade, and students must have an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.
**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.

127. Hungarian Culture and Literature. (4) Lecture, two hours. Lectures and readings in English. P/NP or letter grading.

128A. Advanced Tutorial Instruction in Hungarian. (2) Tutorial, one hour; laboratory, one hour. Preparation: two years of Hungarian and/or Hungarian placement test. Tutorial and guided independent study of advanced Hungarian: advanced conversation, composition, vocabulary development, and review of selected grammar topics. May be repeated for credit with topic change. P/NP or letter grading.

128B-187M. Advanced Tutorial Instruction in Polish. (2 each) Tutorial, one hour; laboratory, one hour. Preparation: prior course in sequence or Polish placement test. Tutorial and guided independent study of advanced Polish: advanced conversation, composition, vocabulary development, and review of selected grammar topics. May be repeated for credit with topic change. P/NP or letter grading.

**Czech**

**Upper Division Courses**

101A-101B-101C. Introduction to Czech Language and Culture. (5-5-5) Lecture, five hours. Course 101A is recommended preparation for 101B, which is recommended preparation for 101C. Each course may be waived with consent of instructor. Beginning Czech language courses with strong cultural component. P/NP or letter grading.

102A-102B-102C. Advanced Czech. (4-4-4) Lecture, three hours. Preparation: course 101C (may be waived with consent of instructor). Course 102A is recommended preparation for 102B, which is recommended preparation for 102C. Each course may be waived with consent of instructor. P/NP or letter grading.


155. Survey of Czech Literature from Middle Ages to Present. (4) Lecture, three hours. Lectures and readings in English. P/NP or letter grading.

187A. Advanced Tutorial Instruction in Czech. (2) Tutorial, one hour; laboratory, one hour. Enforced requisite: course 102C or Czech placement test. Tutorial and guided independent study of advanced Czech: advanced conversation, composition, vocabulary development, and review of selected grammar topics. May be repeated for credit with topic change. P/NP or letter grading.

187B-187M. Advanced Tutorial Instruction in Polish. (2 each) Tutorial, one hour; laboratory, one hour. Preparation: prior course in sequence or Polish placement test. Tutorial and guided independent study of advanced Polish: advanced conversation, composition, vocabulary development, and review of selected grammar topics. May be repeated for credit with topic change. P/NP or letter grading.

**Lithuanian**

**Upper Division Courses**

101A-101B-101C. Elementary Lithuanian. (4-4-4) Lecture, five hours. Course 101A is recommended preparation for 101B, which is recommended preparation for 101C. Each course may be waived with consent of instructor. Basic courses in Lithuanian language. P/NP or letter grading.

102A-102B-102C. Advanced Lithuanian. (4-4-4) Lecture, three hours. Preparation: course 101C (may be waived with consent of instructor). Course 102A is recommended preparation for 102B, which is recommended preparation for 102C. Each course may be waived with consent of instructor. Review and reinforcement of grammar introduced in first year of study, expansion of vocabulary, further training in written and oral expression. P/NP or letter grading.

103. Intensive Elementary Lithuanian. (12) Lecture, 19 hours. Intensive basic course in Lithuanian 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 Lithuanian language. P/NP or letter grading.

187A. Advanced Tutorial Instruction in Lithuanian. (2) Tutorial, one hour; laboratory, one hour. Preparation: prior course in sequence or Lithuanian placement test. Tutorial and guided independent study of advanced Lithuanian: advanced conversation, composition, vocabulary development, and review of selected grammar topics. May be repeated for credit with topic change. P/NP or letter grading.

187B. Advanced Tutorial Instruction in Romanian. (2) Tutorial, one hour; laboratory, one hour. Preparation: prior course in sequence or Romanian placement test. Tutorial and guided independent study of advanced Romanian: advanced conversation, composition, vocabulary development, and review of selected grammar topics. May be repeated for credit with topic change. P/NP or letter grading.

**Polish**

**Upper Division Courses**

101A-101B-101C. Elementary Polish. (5-5-5) Lecture, five hours. Course 101A is recommended preparation for 101B, which is recommended preparation for 101C. Each course may be waived with consent of instructor. Introduction to grammar; instruction in speaking, listening, reading, and writing. P/NP or letter grading.

102A-102B-102C. Advanced Polish. (4-4-4) Lecture, three hours. Recommended preparation: course 101C (may be waived with consent of instructor). Course 102A is recommended preparation for 102B, which is recommended preparation for 102C. Each course may be waived with consent of instructor. P/NP or letter grading.

152. Survey of Romanian Literature. (4) Lecture, three hours. Lectures and readings in English. Survey of Romanian literature from Middle Ages to present. P/NP or letter grading.

152A-152B-152C. Survey of Polish Literature. (4-4-4) Lecture, three hours. Lectures and readings in English. Letter grading. 152A. From the Middle Ages to Neoclassicism; 152B. Reimaging a Nation. Readings in 19th-century Polish literature and culture. 152C. Dreaming, Mocking, and Writing “as it.” Readings in modern Polish literature and culture.

187A. Advanced Tutorial Instruction in Polish. (2) Tutorial, one hour; laboratory, one hour. Preparation: two years of Polish and/or Polish placement test. Tutorial and guided independent study of advanced Polish: advanced conversation, composition, vocabulary development, and review of selected grammar topics. May be repeated for credit with topic change. P/NP or letter grading.

**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.

**Rumanian**

**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**

101A-101B-101C. Elementary Romanian. (5-5-5) Lecture, five hours. Course 101A is recommended preparation for 101B, which is recommended preparation for 101C. Each course may be waived with consent of instructor. Basic courses in Romanian language. P/NP or letter grading.

102A-102B-102C. Advanced Romanian. (5-5-5) Lecture, five hours. Recommended preparation: course 101Q (may be waived with consent of instructor). Course 102A is recommended preparation for 102B, which is recommended preparation for 102C. Each course may be waived with consent of instructor. Differences between oral and written discourse, expansion of students’ general and academic vocabulary, and increase of range of grammatical structures for use in speaking and writing. Cultural information to be included in readings. P/NP or letter grading.


121. Survey of Hungarian Literature in Translation. (4) Lecture, three hours. Designed for students in general and comparative literature, as well as students interested in Finno-Ugric studies. Survey of main trends and contacts with other literatures. P/NP or letter grading.

127A. Advanced Tutorial Instruction in Hungarian. (2) Tutorial, one hour; laboratory, one hour. Preparation: two years of Hungarian and/or Hungarian placement test. Tutorial and guided independent study of advanced Hungarian: advanced conversation, composition, vocabulary development, and review of selected grammar topics. May be repeated for credit with topic change. P/NP or letter grading.

128A. Advanced Tutorial Instruction in Hungarian. (2) Tutorial, one hour; laboratory, one hour. Preparation: two years of Hungarian and/or Hungarian placement test. Tutorial and guided independent study of advanced Hungarian: advanced conversation, composition, vocabulary development, and review of selected grammar topics. May be repeated for credit with topic change. P/NP or letter grading.

187A. Advanced Tutorial Instruction in Polish. (2) Tutorial, one hour; laboratory, one hour. Preparation: two years of Polish and/or Polish placement test. Tutorial and guided independent study of advanced Polish: advanced conversation, composition, vocabulary development, and review of selected grammar topics. May be repeated for credit with topic change. P/NP or letter grading.
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.

10. Intensive Elementary Russian. (12) Lecture, 19 hours. Intensive basic course in Russian language equivalent to courses 1, 2, 3. P/NP or letter grading.
11A-11B-12A-12B-13A-13B. Self-Paced Program in Russian. (2-4-4-4) Basic courses in the 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.
15A-15B. Accelerated Elementary Russian. (8-7) Recitation, five hours; laboratory, two hours. Material of first-year Russian course to be covered in two terms, with extensive use of language laboratory and the Russian Room. P/NP or letter grading.
25. Great Russian Novel. (5) Lecture, three hours; discussion, one hour. Not open for credit to students with credit for course 25W. Designed for nonmajors. Knowledge of Russian not required. Study of major works by great 19th-century Russian novelists. P/NP or letter grading.
25W. Great Russian Novel. (5) Lecture, three hours; discussion, one hour. Enforced requisite: English Composition 3 or 3H or English as a Second Language 60 for course 25. P/NP or letter grading.
30. Russian Literature and World Cinema. (4) Lecture, three hours; discussion, one hour. Examination 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 cinema, and one 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 1900s to current developments, with focus on cinematic styles, genres, and directors. Particular attention to differences between visual and verbal storytelling. P/NP or letter grading.
32. Russia and Asia: Cultural Dialogues. (5) Lecture, three hours; discussion, one hour. Since end of Soviet Union, Russian and cultural flux within non-Christian lands neighboring Russia has increased dramatically. Given radical rejection of Russian heritage in most former Soviet territories, key distinctions in humanities have become unclear, including fundamental confusion between Slavic and Near Eastern studies. Examination of relation of Russia’s culture to its borders: Caucasus, Central Asia, China, and Japan. P/NP or letter grading.
90A. Introduction to Russian Civilization. (5) Lecture, three hours; 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; discussion, 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 or English as a Second Language 60 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. Weekly discussions focus on varied approaches to writing addressing class topics. Five short papers required. Satisfies Writing II requirement. Letter grading.

Upper Division Courses

100A-100B-100C. Literacy in Russian. (4-4-4) Lecture, three hours. Course 100A is requisite to 100B, which is requisite to 100C. For students who speak Russian but have difficulty reading and writing. Focus on improving reading and writing skills, increasing vocabulay, and developing speaking skills required for academic discourse. P/NP or letter grading.
102A-102B-102C. Topics in Advanced/Superior Russian. (4-4-4) Hours. Requisite: course 101C. Discussion and composition, with emphasis on vocabulary development and review of selected grammar topics. Readings in fiction and non-fiction, films, and Internet. Each course may be taken independently and may be repeated for credit. P/NP or letter grading.
103A-103B-103C. Russian for Native and Near-Native Speakers. (4-4-4) Lecture, three hours. Course 103A is not requisite to 103B, which is not requisite to 103C. Improvement of oral and written language skills, emphasizing correct and diversified use of language and addressing individual grammatical difficulties. May be repeated for credit with topic and/or instructor change. P/NP or letter grading. 103A. Russian National Identity. Readings in literature, philosophy, criticism, film. 103B. Literature and Film. Film adaptations of Russian literature. Readings and screenings. 103C. Special Topics.
107A-107B-107C. Russian Social and Cultural Studies. (4-4-4) Lecture, three hours. Exploration of topics such as media, Russian science and culture, with emphasis on press, television, and Internet. Each course may be taken independently and may be repeated for credit. P/NP or letter grading.
108. Russian for Business: Language and Culture. (4) Lecture, three hours. Discussion of economic and business in Russia, language of advertising, business and official correspondence. P/NP or letter grading.
M118. History of Russia, Origins to Rise of Musco- vov. (4) Same as History M127A. Lecture, three hours; discussion, one hour, scheduled. Designed for juniors/seniors. Kievian Russia and its culture, Appa-
ic works in Russian literary tradition, including works from neoclassical, Romantic, realist, and futurist tradi-
tions. P/NP or letter grading.

M127. Women in Russian Literature. (4) (Same as Gender Studies M127) Lecture, three hours. De-
signed for juniors/seniors. Lectures and readings in
English. Introduction to alternative tradition of wom-
men’s writing in Russia and the Soviet Union. Emphasis on images of women expressed in this tradition as com-
pared with those found in works of contemporary male writers. P/NP or letter grading.

128. Russian Science Fiction. (4) Lecture, three
hours. Required for senior major. Introduction to Rus-
sian science fiction in the 20th century. Emphasis on func-
tion of science fiction in development of Russian cul-
ture before and after the October Revolution. P/NP or letter grading.

129. Animation and Music Video. (5) Lecture, three
hours; discussion, one hour. Designed for juniors/se-
niors. Lectures and readings in English. Humanities
have recently passed through so-called visual turn; tradi-
tional emphases on language(s) in field have been reconsidered in light of society’s increasingly vi-
 sual workings. New attitude toward our own changing culture (i.e., toward its future) has equal value if ap-
plied retroactively to cultures of one era against another. In territory where many tongues or tradi-
tions needed to be ironed out, visual often plays spec-
ial role in social cohesion. Because of past politics and today’s profit-driven events, small fickle forms of
visual narrative reflect change and social change much more than ponderous grandeur of feature-
length cinema. Letter grading.

M130A-130B-130C. Russian Poetry. (4-4-4) Lecture, three hours. Preparation: third-year Russian rec-
ommended. Lectures and readings in Russian. May be repeated for credit with topic and/or instructor
change. P/NP or letter grading.

M131. History of Russian Cinema. (4) Lecture, three
hours. Overview of most popular art form in world’s
largest nation to show how cinema struggled under incipient capitalism in Russia, how moviemaking on other side of world departed from path marked out by
Hollywood and London, how films operate as form of
nationwide persuasion, relationship between word and image in those acts of persuasion, how even
fractured and incomplete such films are on account of short
encyclopedia desir(e)(s), different forms of social existence as
reflect on both capitalism and communism, and what
values of world’s biggest country are. Role of
language in self-definition. Is selfhood verbal or visual
what values of world’s biggest country are. Role of
language in self-definition. Is selfhood verbal or visual
what values of world’s biggest country are. Role of
language in self-definition. Is selfhood verbal or visual
what values of world’s biggest country are. Role of
language in self-definition. Is selfhood verbal or visual
what values of world’s biggest country are. Role of
language in self-definition. Is selfhood verbal or visual
270. Russian Poetics. (4) Lecture, three hours. Introduction to technical study of Russian poetics and verification, 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. Vladimir Vladimirovich Nabokov (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. Required: course 211A. Selected 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. Required: course 211B. Selected 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, three hours. Required: 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. Required: 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. Required: courses 211B, 212A, 212B, 213A. 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 history of Russian culture.

Slavic Languages and Literatures / 611

299. Tutorial, three hours. Course 211A is recommended preparation for 101B, which is recommended preparation for 101C. Each course may be waived with consent of instructor. Basic courses in Serbian/Croatian. P/NP or letter grading.

101A-101B-101C. Elementary Serbian/Croatian. (5-5-5) Lecture, five hours. Course 101A is recommended preparation for 101B, which is recommended preparation for 101C. Each course may be waived with consent of instructor. Basic courses in Serbian/Croatian. P/NP or letter grading.

102A-102B-102C. Advanced Serbian/Croatian. (4-4-4) Lecture, three hours. Recommended preparation: course 101C (may be waived with consent of instructor). Course 102A is recommended preparation for 102B, which is recommended preparation for 102C. Each course may be waived with consent of instructor. P/NP or letter grading.


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. Enforced requisite: course 102C or Serbian/Croatian placement test. Tutorial and guided independent study of advanced Serbian/Croatian: advanced composition, vocabulary development, and review of selected grammar topics. May be repeated for credit with topic change. P/NP or letter grading.

187B-187M. Advanced Tutorial Instruction in Serbian/Croatian. (2) Tutorial, one hour; laboratory, one hour. Preparation: prior course in sequence or Serbian/Croatian placement test. Tutorial and guided independent study of advanced Serbian/Croatian: advanced conversation, composition, vocabulary development, and review of selected grammar topics. May be repeated for credit with topic change. 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 Languages. (4) (Same as Applied Linguistics CM128,) Lecture, three hours. Consideration of issues relevant to heritage language learners (HLLs) and to heritage language (HL) instruction. Readings and discussion on such topics as definitions of HLLs and HLs; linguistic, demographic, sociolinguistic, and sociocultural profile of HLLs, particularly HL groups most represented among UCLA students; institutional and instructor attitudes toward HLLs; impact of student motivation and expectations on HL curriculum and teaching approaches; similarities and differences between HLLs and foreign language learners (FLs) regarding teaching methods and materials; diagnostic testing and needs analysis; use of oral/aural proficiency. May be repeated for credit with instructor consent. S/U or letter grading.

125. Interwar Central European Prose. (4) Lecture, three hours. Analyses of a variety of 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.

197. Individual Studies in Slavic Languages and Literatures. (2 to 4) Tutorial, to be arranged. Limited to 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. Letter grading.

199. Directed Research in Slavic Languages and Literatures. (2 to 8) Tutorial, to be arranged. Limited to juniors/seniors. Individual intensive study, with scheduled meetings to be arranged between faculty member and student. Assigned reading and tangible evidence of mastery of subject matter required. 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 required to 198B. Limited to junior/senior departmental majors. Honors project 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 8) Tutorial, to be arranged. Limited to juniors/seniors. Supervised individual research under guidance of faculty mentor. Culminating paper required. May be repeated for credit. Individual contract required. P/NP or letter grading.

Graduate Courses

200A. Literary Proséminar. (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.


201. Introduction to Old Church Slavic. (4) Lecture, three hours. Required for M.A. (linguistics, literature). Introduction to phonology and grammar; readings.
202. Introduction to Comparative Slavic Linguistics. (4) Lecture, three hours. Prerequisite: course 201. Required for introduction to comparative phonology and grammar of Slavic languages.

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 language, literature, sociolinguistics, gender issues, and Slavic culture in general. S/U or letter grading.

CM214. Teaching and Learning of Heritage Languages. (3) Slavic Linguistics CM229. Lecture, three hours. Consideration of issues relevant to heritage language learners (HLL) and to heritage language (HL) instruction. Readings and discussion on such topics as definitions of HLLs and HLs; linguistic, demographic, sociolinguistic, and sociocultural profile of HLLs; particularly HL groups most represented among UCLA students; institutional and instructor attitudes toward HLLs; impact of student motivation and expectations on HL curriculum and teaching approaches; similarities and differences between HLLs and foreign language learners (FLLL) regarding teaching methods and materials; diagnostic testing and needs analysis; use of oral/aural proficiency as springboard for literacy instruction; optimization of instruction of mixed HL and FL classes. Action research component included. Concurrently scheduled with course CM114. S/U or letter grading.


M229. Introduction to Slavic Bibliography. (2) (Same as Russian Studies M229C) Lecture, one hour; laboratory, 90 minutes. May be repeated for credit. S/U or letter grading.

230A-230B-230C. Topics in Comparative Slavic Literature. (4-4-4) Lecture, three hours. Recommended preparation: upper division courses in Czech, Polish, Russian, and Yugoslav literatures. Two terms required for Ph.D. (literature). May be repeated for credit with consent of instructor and graduate adviser.

230A. Middle Ages through Baroque. 230B. Classicism to Romanticism. 230C. Realism to Modernism.

241A-241B. Advanced Old Church Slavic. (4-4) Lecture, three hours. Prerequisite: course 201. Recommended: two years of Greek and/or Latin. Upper division courses in classical studies. May be repeated for credit with consent of instructor. Basic courses in Cyrillic literature. P/NP or letter grading.


251. Introduction to Baltic Linguistics. (4) Lecture, three hours. Prerequisite: course 202. Introduction to Baltic linguistics, with special attention to relationship between Baltic and Slavic.

261. Slavic Paleography. (4) Lecture, three hours. Prerequisite: course 201. Introduction to Slavic paleography: inscriptions, birchbark letters, Glagolitic and Cyrillic texts.

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, Italian M299, Spanish M299) Lecture, two hours. Essentials of library research strategy and effective searching in key print and online sources 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 curriculum and instruction at UCLA. May be repeated for credit. S/U 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 8) Tutorial, to be arranged. S/U grading.

597. Preparation for M.A. Comprehensive Examination or Ph.D. Qualifying Examinations. (2 to 8) Tutorial, to be arranged. S/U grading.


Ukrainian

Upper Division Courses

101A-101B-101C. Elementary Ukrainian. (5-5-5) Lecture, five hours. Course 101A is recommended preparation for 101B, which is recommended preparation for 101C. Each course may be waived with consent of instructor. Basic courses in Ukrainian language. P/NP or letter grading.

602A-102B-102C. Advanced Ukrainian. (4-4-4) Lecture, three hours. Recommended preparation: course 101C (may be waived with consent of instructor). Course 102A is recommended preparation for 102B, which is recommended preparation for 102C. Each course may be waived with consent of instructor. Development of advanced listening, speaking, reading, and writing skills. P/NP or letter grading.

152. Ukrainian Literature. (4) Lecture, three hours. Lectures and readings in English. Survey of writers, literary trends, and issues in Ukrainian literature from the late 18th century to the present. Special attention to works of such major figures as Kotlyarevsky, Shevchenko, Franko, Ukrainka, and Tychyna.

187A. Advanced Tutorial Instruction in Ukrainian. (2) Tutorial, one hour; laboratory, one hour. Preparation: two years of Ukrainian and/or Ukrainian placement test. Tutorial and guided independent study of advanced Ukrainian: advanced conversation, composition, vocabulary development, and review of selected grammar topics. May be repeated for credit with topic change. P/NP or letter grading.

187B-187M. Advanced Tutorial Instruction in Ukrainian. (2 each) Tutorial, one hour; laboratory, one hour. Preparation: prior course in sequence or Ukrainian placement test. Tutorial and guided independent study of advanced Ukrainian: advanced conversation, composition, vocabulary development, and review of selected grammar topics. May be repeated for credit with topic change. P/NP or letter grading.

Social Thought

Scope and Objectives

The Social Thought minor provides an opportunity for students to take a series of courses that focus on modern social and intellectual thought from the 17th through the 20th century. The minor builds on lower division introductory exposure to the history of modern ideas as embodied in a number of key texts by significant thinkers such as Descartes, Hobbes, Locke, Smith, Rousseau, Wollstonecraft, Mill, Marx, Weber, Darwin, Nietzsche, Freud, DuBois, de Beauvoir, and others and promotes more intense and broad exposure to the great ideas and modern thinkers of the contemporary world. It culminates with enrollment in a two-semester senior thesis tutorial related to a theme from previous coursework and closely supervised by a faculty mentor. The senior thesis occurs in conjunction with a weekly research colloquium where students meet with faculty members to discuss their senior thesis work or related work in the minor.

The minor is intended to supplement the liberal arts education of undergraduates who, through their major, are interested in finding an area of specialization related to career objectives and who seek broad and systematic training in the major ideas of the modern world.

Undergraduate Study

Social Thought Minor

The Social Thought minor is limited to students who formally apply and are admitted. To apply, students must submit an application, a personal statement supporting their interest in pursuing the minor, a letter of recommendation from a faculty mentor, and a transcript to the College Academic Counseling Office, A316 Murphy Hall.

To enter the minor, students must have an overall grade-point average of 2.0 or better and apply for admission only after successfully completing the following lower division re-
requirements: General Education Clusters 21A and 21B, OR two courses from German 56, Honors Collegium 20, 21W, 55, 57, 62, 83W, Philosophy 6, Political Science 10, Sociology 10.


Required Research Colloquia and Senior Thesis (12 units): Students must also complete Social Thought 190A and 199A in one term and courses 190B and 199B in the following term. A minimum of 20 units applied toward the minor requirement must be in addition to units applied toward major requirements or another minor. Each minor course must be taken for a letter grade, and students must have an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

Social Thought
Upper Division Courses
190A-190B. Research Colloquia in Social Thought I, II; (2-3) Lecture, four hours. Corequisite for course 190A: course 190A for 190B: course 190B. 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 190A for 199B: course 190B. 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.

Rosina M. Beccera, Ph.D., Director of Field Education
Karen L. Lee, L.C.S.W., M.S.W., Associate Director of M.S.W. Education

Professors
Rosina M. Beccera, Ph.D.
David Cohen, Ph.D.
Yeheskel Hasenfeld, Ph.D.
Aurora P. Jackson, Ph.D.
Mark S. Kaplan, Dr.P.H.
Paul M. Ong, Ph.D.
Robert F. Schilling, Ph.D.
Fernando M. Torres-Gil, Ph.D.

Professors Emeriti
A.E. Benjamin, Ph.D.
Diane S. de Anda, Ph.D.
Doris S. Jacobson, Ph.D.
Stuart A. Kirk, D.S.W. (Marjorie Crump Professor Emeritus of Social Welfare)
James E. Lubben, D.S.W.
Barbara J. Nelson, Ph.D.
Alex J. Norman, D.S.W.
Jack Rothman, Ph.D.
Leonard Schneiderman, Ph.D.
Rachel A. Zuckerman, Ph.D.

Associate Professors
Laura S. Abrams, Ph.D.
Todd M. Frank, Ph.D.
Bridget J. Freisthler, Ph.D.
Alfreda P. Iglehart, Ph.D.
Lene F. Levy-Storms, Ph.D.
Allee Moon, Ph.D.

Assistant Professor
Ian Holloway, Ph.D.

Adjunct Associate Professor
Jonja J. Leap, Ph.D.

Adjunct Professor
James McGuire, Ph.D.

Fieldwork Consultants
Laura Alongi, L.C.S.W.
Latricia R. Dunham, M.S.W.
Woo K. (Toby) Hur, M.S.W.
Gerardo P. Lavista, L.C.S.W., M.S.W.
Mary Kay Oliveri, L.C.S.W., M.S.W.
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 Luskin School of Public Affairs, the program affords students instructional opportunities in the other affiliated departments — Public Policy and Urban Planning.

Beyond national opportunities in the profession of social work, there is increasing demand for qualified and experienced social workers to serve in the international field, where many social service programs are conducted under the auspices of the United Nations, the U.S. government, and national sectarian organizations. Graduates of the doctoral program generally secure appointments at major universities or research centers.

The challenge to the department, the profession, and those who join us as students is to prepare to forge the paths, build the bridges, and shape the future to ensure that all individuals, families, and communities enjoy better education, better health care, 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://grad.ucla.edu/gasaa/library/pgmgintro.htm. In many cases, more detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs.

Graduate Degrees

Social Welfare
Upper Division Courses
100A. Introduction to Social Welfare: Policies and Programs. (4) Lecture, four hours. Origin and development of major U.S. social welfare programs and policies guiding them, with emphasis on analysis of policy developments/issues related to provision of social welfare services. Study of historical and current responses of profession to major social problems. P/NP or letter grading.

100B. Social Welfare Policy: Overview. (4) Lecture, four hours. Required: 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.

102. Social Welfare Organizations and Community Systems. (4) Lecture, four hours. Recommended requirements: courses 100A, 100B. Detailed demonstration of implementation of policy via functioning of human service organizations. Examination of organizational
130A-130B. Community Research and Services Seminars. (4-4) Seminar, three hours; service learning, four hours; study, five hours. Course 130A is requisite to 130B. Limited to juniors/seniors. History and roles of social welfare policy within government, organizations, and communities. Reflections about service-learning site experiences, with application of course content to field settings. Students to be assigned to two-term tutoring/mentoring site where they apply tutoring techniques as they assist middle school students in underdeveloped areas of Los Angeles County. In Progress (130A) and P/NP or letter (130B) grading.

131. Poverty, Poor, and Welfare Policy. (Seminar, three hours; limited to juniors/seniors. Recent research and policy developments in the U.S., with specific emphasis on single-parent households. Overview of measurements and characteristics of poor people; alternative theoretical explanations of poverty; historical overview of major social welfare policies to combat poverty, particularly Aid to Families with Dependent Children (AFDC) and Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA); and critical appraisal of recently enacted state welfare reform policies. Relationship between research knowledge about poverty and current policies, and effects of gender, ethnicity, and class on patterns of poverty and policy responses. P/NP or letter grading.

132. Community Analysis and Community Needs. (Seminar, four hours; limited to juniors/seniors. Theoretical and practical foundation for understanding and implementing evaluation of community activities; major components of communities and for determining community needs. Use of systems theory as 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 is 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 communities work together in partnership to enhance quality of community life. P/NP or letter grading.

140. Introduction to Study of Aging. (Seminar, three hours; limited to juniors/seniors. Perspectives on major features of human aging — biological, social, psychological, and humanistic. Introduction to information on range of influences on aging, and on aging as a stage of life for subsequent specialization. P/NP or letter grading.

142SL. Intergenerational Communication across Lifespan. (Seminar, three hours) Lecture, three hours. Requisite: course 140. Limited to juniors/seniors. What is the impact of intergenerational communication on families? How do you talk to your grandparents? Does your family talk well to one another as group? How do you communicate well with less 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, interpersonal, and societal issues related to intergenerational communication across lifespan. Letter grading.

151. Child Welfare Policy in America. (Seminar, three hours. Limited to juniors/seniors. Examination of public child welfare system in the U.S. Review of social policies and programs that impact children. History of social policies and programs for children, including discussion of orphanages, foster care, and adoption. Transformation of public child welfare system into a self-protection system. Welfare reform based on child policies and programs in the U.S. Major programs designed to provide safety net for disadvan-
taged children, including welfare, food stamps, child care, and special education. Child care programs. Review of research and analysis in this area. Overview of social services and programs that impact children in the U.S. Examination of comparative policies in other countries. P/NP or letter grading.

162. Health Policy and Services. (Seminar, three hours. Limited to juniors/seniors. Contemporary issues in healthcare financing and delivery and historical perspective on these issues. Role of government in healthcare and ways controversy about this role continues to shape and constrain public policy in health. Major public programs, notably Medicare and Medicaid, and their relation to process and cost for diverse vulnerable populations. Various public and private approaches to healthcare reform and potential thinking about structural impact, cost, and political feasibility. Issues in care of persons with chronic illness and debate about public and private approaches to long-term care reform. Social work roles in healthcare policy and practice. P/NP or letter grading.

163. Prevention of Risky Substance Use and Related Problems. (Seminar, four hours. Limited to juniors/seniors. Prevention of substance use and related harms from legal and illegal substances is major concern to parents, communities, and nations. Examination of research related to patterns of drug use and related harm (such as crime and mental health disorders) and effectiveness of interventions to reduce these problems. Through review of science-based programs and policies, evaluation of effectiveness of evidence-based interventions to increase student knowledge and experiment with effective interventions to reduce drug-related harm, using most up-to-date information. P/NP or letter grading.

164. HIV Prevention in U.S. and Developing World. (Seminar, 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, drug and injection drug use, and other forms of harm reduc-
ing technologies to reduce HIV transmission, and fisc-
cal, cultural, ethical, and moral dilemmas in allocation of prevention resources. P/NP or letter grading.

168. Disability Policy and Services in Contempora-
ry America. (Seminar, four 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 dis-
abilities in contemporary America? How has U.S. re-
sponded 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 groups? What do we know about extent to which public policies and programs are responsive to people in need? How do demographics, economics, and politics continue to influence evolving public policy responses? P/NP or letter grading.

181. Nonprofit Sector, State and Civil Society. (Seminar, 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 so-
cial history of nonprofit sector in U.S. Exploration of legal and policy environments and direct organiza-
tions. Comparative analysis between U.S. and other countries. P/NP or letter grading.

191. Variable Topics Research Seminars: Social Welfare. (Seminar, three hours; outside study, nine hours. Examination in depth of particular subfield of social welfare (e.g., children’s welfare, children and youth, nonprofit, health, mental health). Limits of investiga-
tion set by individual instructor. May be repeated for credit with topic change. Letter grading.

192. Social Welfare Case Studies. (1 Seminar, one hour; outside study, three hours. Course 195. Not open to freshmen. Introduction to social work roles in healthcare policy and practice. P/NP or letter grading.
195. Community Internships in Social Welfare. (2) Tutorial, four hours. Corequisite: course 194. Not open to freshmen/introductory course in community-based child health and advocacy. Students learn about community resources for children and families through service learning experience and work with pediatric patients and families in UCLA pediatric unit. Students meet on regular basis with instructor and provide periodic reports of their experience. May be repeated for credit. Individual contract with supervising faculty member required. Letter grading.

199. Directed Research in Social Welfare. (2 or 4) Tutorial, two hours. Limited to juniors/seniors. Supervised individual research or investigation under guidance of faculty mentor. Cullingman paper required. May be repeated for credit. Individual contract required. P/NP or letter grading.

Graduate Courses

201A-201B-201C. Dynamics of Human Behavior. (3-3-3) Formerly numbered 201A-210B.) Lecture, three hours. Biopsychosocial factors associated with individual and group behavior and development as applicable in social functioning of individuals and groups. Emphasis on theoretical issues and research evidence related to unified theory of human development. Letter grading.

202A-202B. Dynamics of Human Behavior. (2-2) Lecture, three hours. Requisites: courses 201A, 201B. Deviations and pathologies or stresses in physical, emotional, and social human functioning as those problems relate to role and function of social workers. S/U or letter grading.

203A-203B-203C. Integrative Seminars. (2-2-2) Seminar, two hours. Integrative courses that bring together the theory and practice of social work in variety of topic areas relevant to profession. Includes identification of problem areas and populations-at-risk requiring further examination. S/U or letter grading.


205. Cross-Cultural Awareness. (4) Lecture, two hours; discussion, two hours. Designed to aid students in development of professional perspectives that will allow them to work effectively with members of myriad cultural groups, to discuss with clarity alternative concepts of culture in determination of individual behavior responses, and to identify their own personal cultural values and assumptions. S/U or letter grading.

206A. Homelessness: Housing and Social Service Issues. (4) (Same as Urban Planning M270.) Lecture, 90 minutes; discussion, 90 minutes; one field trip. Review of current status of homelessness: who homeless are, what social 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.

220. History and Philosophy of Social Welfare. (2) Discussion, two hours. History of social work as field: body of knowledge, method and process, and point of view. Emphasis on economic, political, social, philosophical, and scientific climate of period. S/U or letter grading.


221B. Social Welfare Policy and Services II. (4) Lecture, three hours; outside study, nine hours. Understanding of significant theoretical constructs and relevant empirical evidence dealing with how organizational and individual functions, Development of beginning skill in organizational analysis. Special attention to organizational analysis of social welfare services. S/U or letter grading.

222A-222B. Foundations of Social Welfare. (2-2) Lecture, two hours; discussion, one hour. Overview of history of social work profession and how social justice has shaped its underpinnings and influenced social policy that affects profession’s primary fields of practice. Understanding of social services and social service needs of racial and ethnic populations. In Progress (222A) and S/U or letter (222B) grading.

222A. History, Five weeks in Fall Quarter. Requisite: course 222A.


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. social welfare policies, particularly in social policy issues and conceptual framework for presentation, make choices about existing and proposed programs—approaches to homeless. Letter grading.

225A. Child Abuse and Neglect. (4) Seminar, two hours; discussion, two hours. Focus on craft of scholarly writing for dissertation. Emphasis on analysis of social policy issues and conceptual framework for presentation, make choices about existing and proposed programs—approaches to homelessness. Letter grading.

227A. 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. Survey of several problems and alternative ways in which problems have been conceptualized and studied to understand how scholars use theory and empirical evidence to advance what is known, what is yet unknown, where there are important gaps in understanding particular problems, and what might be done to solve them. Letter grading.

229A. Community Internships in Social Welfare. (2) Lecture, three hours; outside study, nine hours. Corequisite: required social work practicum. Advanced-level, critical analysis of key contributors, conceptual frameworks, core theories, current controversies, and recent research findings in contemporary cognitive-behavioral therapy; case conceptualization from cognitive-behavioral perspective; specific cognitive and behavioral assessment methods and intervention techniques and their typical applications; contextual considerations, including human diversity and other sociocultural and developmental factors in case conceptualizations and treatment plans. S/U or letter grading.

231A. Advanced Theory of Social Welfare Practice with Individuals, Families, and Groups: Substance Abuse Intervention. (4) Lecture, three hours; outside study, nine hours. Corequisite: required social work practicum. Advanced-level, critical analysis of major intervention approaches—individual, family, group, and environmental—to treating substance abuse and dependency. Specific attention to skills and self-awareness to integrate biological, psychological, and social factors in assessing and intervening with substance-using clients and target populations. S/U or letter grading.


231C. Advanced Theory of Social Welfare Practice with Individuals, Families, and Groups: Substance Abuse Intervention. (4) Lecture, three hours; outside study, nine hours. Corequisite: required social work practicum. Advanced-level, critical analysis of major intervention approaches—individual, family, group, and environmental—to treating substance abuse and dependency. Specific attention to skills and self-awareness to integrate biological, psychological, and social factors in assessing and intervening with substance-using clients and target populations. S/U or 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 individual, group, and family mental health services, development of mental health problems, and intervention strategies. Letter grading.

231L. Advanced Theory of Social Welfare Practice with Individuals, Families, and Groups: 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 individuals, families, and groups in health care settings. Emphasis on evidence-based approaches to providing individual, group, and family health services, development of health problems, and intervention strategies. Letter grading.

231N. Advanced Theory of Social Welfare Practice with Individuals, Families, and Groups: Children, Adolescents, and Families. (4) Lecture, three hours; outside study, nine hours. Corequisite: required social work practicum. Designed to provide students with grounding in social work practice with children, adolescents, and families. Emphasis on evidence-based approaches to providing individual, group, and family services, development of problems in children, adolescents, and families, and intervention strategies. Letter grading.

231P. Advanced Theory of Social Welfare Practice with Individuals and Groups: Gerontology. (4) Formerly numbered 231D.) Lecture, three hours; outside study, nine hours. Corequisite: required social work practicum. Designed to provide students with grounding in social work practice with older adults. Emphasis on evidence-based approaches to providing individual, group, and family services, development of problems in older adults, and intervention strategies. Letter grading.


241K. Advanced Theory of Social Welfare Practice in Organizations, Communities, and Policy Settings. (4) Lecture, three hours; outside study, nine hours. Corequisite: required social work practicum. Designed to provide students with grounding in social work practice with organizations, communities, and policy settings. Emphasis on evidence-based approaches to providing individual, group, and policy services, development of problems in organizations, communities, and policy settings, and intervention strategies. Letter grading.


ward development of research knowledge and tech-
iques for social work practice. In Progress (281A, 281B, 281C) and (281D).

285A-285B-285C. Research in Social Welfare. (4-4-
4) Discussion, three hours. Review of areas of re-
search of concern to social workers, with special at-
tention to design, instrument construction, data col-
lection. Three hours. Examination of data reduction, analysis and interpretation. Designs studied include survey, panel, experimental observation, and theory development research. S/U or letter grading.

285D. Research in Child Welfare. (4) Lecture, three hours. Integrated examination of development of em-
pirical research in child welfare field. Critical assess-
ment of current approaches to meet needs of children who come to attention of child welfare agencies. Ex-
amination of research and theory in child welfare field. Review of student knowledge of research methods and sta-
tistics. 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 design, identifying sampling methods. Special considerations in aging research, including implications for program design, and recruit-
ment issues. Letter grading.

285F. Research in Health. (4) Lecture, three hours. Research in area of health policy and services. Dis-
cussion of readings about range of research from field of health services. Identification of research de-
sign 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.

285G. Research in Mental Health. (4) Lecture, three hours. Research methods in mental health. Ap-
lication of readings about range of research from field of health services. Identification of research de-
sign 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, roles and limitations of evaluation research in real world, development of pro-
posals for feasible program evaluation research. Let-
ter grading.

285I. Research in Youth Populations. (4) Lecture, three hours. Research methods as applied to prob-
lems, issues, and interventions pertaining to youth populations. Three hours. Use of political economy perspective to ana-
lyze forces that have shaped rise and characteristics of nonprofit sector and its constituent elements. Ex-
amination of social history of youth in U.S., Exploration of legal and policy environments and distinct organizational forms. Comparative perspec-
tive between U.S. and other countries. S/U or letter grading.

286. Social Work and Juvenile Justice System. (4) Lecture, three hours; outside study, nine hours. Designed for graduate students. Exploration of evolu-
tion of juvenile justice system in the U.S. and issues that have shaped current policy issues. Focus of social workers in system to be theme throughout course. Letter grading.

290U. Community Development and Housing Policies: Roles of State, Civil Society, and Non-
profits. (4) (Same as Public Policy M223 and Urban Planning M275S.) Lecture, three hours; outside study, nine hours. Designed for graduate students. Examina-
tion of role of U.S. housing policy and role of govern-
ment. Topics approached from perspective of globalization of social, economic, and political activities. Problems of global poverty, social injustice and inequality, and issues of racial, ethnic, and cultural diversity, with emphasis on multifaceted contributions of social work, social ser-
vices, and social welfare and international social de-
velopment within rich and poor countries. Acquisi-
tion of knowledge of international social welfare activities, as well as analytical skills to address and debate complex international issues. S/U or letter grading.

357. Teaching Apprentice Practicum. (1 to 4) Semi-
ar, to be arranged. Preparation: apprentice person-
nel development. Responsibility for development, super-
vision, and evaluation of student teachers. Helps students to test their theoretical knowledge and to acquire dis-
ciplined practice foundation in profession. In Progress (401A, 401B) and S/U (401C) grading.

401A-401B-401C. Practicum: Social Work. (3-3-3) Laboratory, 20 hours. Educationally directed practi-
cum conducted in selected health, welfare, and edu-
cational facilities. Provides opportunities for students to test their theoretical knowledge and to acquire dis-
ciplined 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.

490. Professional Communication for Social Wel-
fare. (2) Lecture, two hours. Writing workshop on stu-
dents’ papers in progress, with eye toward scholarly publication. Analysis and group discussion of rhetorical and stylistic efficacy. May be repeated once. S/U grading.

501. Cooperative Program. (2 to 8) Tutorial, to be arranged. Preparation: consent of UCLA graduate ad-
viser and graduate dean, and host campus instructor,
SOCIETY AND GENETICS

See Institute for Society and Genetics

SOCIOLGY

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Tanya Stivers, Ph.D.

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Lauren M. Duquette-Rury, Ph.D.
Rachel G. Foster, Ph.D.
Kah-Yuet Liu, Ph.D.
Gabriel Rossman, Ph.D.
Edward T. Walker, 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 sociology 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, and one course from Political Science 6, Statistics 10, 11, or 13.

A minimum grade of C is required in each preparation for the major course. Students with a grade-point average less than 2.0 in the preparation coursework are not eligible for admission to the major. Students who repeat any preparation course more than once are automatically denied admission to the major.

Freshman Students

Students must petition to declare the Sociology major. If Sociology 101 or 102 has already been completed, a grade of C or better is required. Grades in any other completed sociology courses for the major must be C- or better.

Transfer Students

Transfer applicants to the Sociology premajor with 90 or more units must complete the following introductory courses prior to admission to UCLA: one introduction to sociology course and one statistics course.

Refer to the UCLA Transfer Admission Guide 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 106A, 106B, 110, 111, 112, 113, M124A, 191H, or Statistics 112; (3) one course from...
each of the following core areas: (a) interactions — Sociology 111, M124A, CM125, 130, 132, 133, or 134, (b) institutions and social processes — course 116, 143, 158, 173, M174, M175, M176, or 181B, (c) power and inequality — courses 156, 157, M181, M182, M165, 181A, 182, 183, or 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, 198A, 198B, and 198C (honors thesis seminars) which may be applied as electives toward the major requirements.

Students must have a 3.5 overall grade-point average, have completed the sociology preparation requirements and, in most cases, have completed the required theory course. Applications are available from the Undergraduate 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://grad.ucla.edu/gasaaa /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. P/NP or letter grading.

2. Social Organization of Black Communities. (5) Same as Afro-American Studies M53. Lecture, four hours; discussion, one hour; field trips. Analysis and interpretation of social organization of black communities, inequality, on origins and development of black communities, competing theories and research findings, defining characteristics and contemporary issues. Letter grading.

3. 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. Explication and analysis of selected social theorists and concepts, especially from the 17th to 19th centuries. Letter grading.

4. Introduction to Sociological Research Methods. (5) Lecture, three hours; discussion, one hour. Introduction to methods used in contemporary sociological research, with focus on issues of research design, data collection, and analysis of data. Fieldwork may be required. Letter grading.

5. Conversation and Society. (4) Lecture, three hours. Examination of social norms that organize conversational interaction in everyday life. Consideration of relationship between conversation and other institutions in society. P/NP or letter grading.

6. Sociology of Migration. (5) Lecture, three hours; discussion, two hours. Focus on fundaments, theories, and research methods used in sociological research through comparative study of international migration. Examination of theoretical debates and empirical analysis of causes and consequences of transnational migration in countries of origin and destination, with focus on issues of race, ethnicity, social networks, development, citizenship, and state in comparative context. Letter grading. 88A-88Z. Lower Division Seminars. (1 each) Seminar, one hour. Limited to 15 freshmen/sophomores. Variable topics of current sociological interest. Consist Sellowth 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 project evaluation and 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, analytical memoing, and grounded theory methods, to analyze these materials and to write ethnographic paper. Letter grading.

110. Historical Methods. (4) Lecture, three hours; discussion, one hour. Designed for 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 reproducible 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, how social actors utilize them, and their unexpected effects. Topics include job search, firm efficiency, and social movements. Utilization 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.


114A-114B. Introduction to Scientific Sociology. (4-4) Lecture, three hours; discussion, one hour. How to make testable arguments about social reality and how to test those arguments in context of study of social stratification, and ethnic and gender inequality. Introduction to elementary, robust analytic tools. P/NP or letter grading.

115. Environmental Sociology. (4) Same as Environment M133. Lecture, three hours; discussion, one hour. Relationship between society and environment. Analysis in detail of interrelations between social factors (such as class, race, gender, and religion) and environmental factors (such as pollution, waste disposal, sustainability, and global warming). P/NP or letter grading.


117. Family Demography. (4) Lecture, three hours; discussion, one hour. Examination of demographic behaviors, such as marriage, divorce, and childbearing, associated with family and household organization. Sociological approach to understanding causes and characteristics and trends and differentials in family formation and dissolution. P/NP or letter grading.

118. Simulating Society: Exploring Artificial Communities. (5) Same as Honors Collegium M148. Seminar, three hours; computer laboratory, one hour. 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. Selective topics on diverse behaviors and cultural forms of primate cousins, with special focus on baboons, chimpanzees, and gorillas. Examination of primate socioculture, 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.

124A-M124B. Conversational Structures I, II. (4-4) Lecture, three hours; discussion, one hour. P/NP or letter grading. M124A. Introduction to some structures that are employed in organization of conversa-
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 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 C214B. 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, producing, using, 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 contemporary societies, and in extra-ordinary 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 thoughts, 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 medieval societies; ritual, the sacred, and experience of the eternal; structuring of urban, modern, and postmodern societies by clock, calendar, and schedule; future value orientation and notion of progress; time, labor, and social domination. P/NP or letter grading.

130. Self and Social Order. (4) Lecture, three hours; discussion, one hour. Examination of social processes shaping experience, definition, and enactment of self and personal identity. P/NP or letter grading.

132. Social Psychology: Sociological Approaches. (4) (Same as Asian 124B, Requisite 122A.) Lecture, three hours; discussion, one hour. Survey of contribution of sociologists to theory and research in social psychology, including theories of social control; conformity and deviation; reference groups; and interaction process. P/NP or letter grading.

133. Collective Behavior. (4) Lecture, three hours; discussion, one hour. Requisite: course 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. Requisite: course 1. Study of group structure, and functioning of groups; analysis of group processes and group products from variety of theoretical viewpoints; implications of various research techniques for group life in contemporary society. P/NP or letter grading.

136. Death, Suicide, and Trauma. (4) (Same as Psychology M163.) Lecture, three hours; discussion, one hour. Sociological analysis of incidence of violent death. Suicide is eighth leading cause of death in U.S. and third leading cause for young people aged 15 to 24. Both kinds of violent deaths are often dismissed as extreme psychopathology, reflecting individual mental health issues. Sociologists argue that suicide and homicide are social facts. Suicide and homicide do not occur randomly in society but are stratified according to social factors such as age, gender, race, sexual orientation, and class. Analysis of strength of this sociological argument and evaluation of explanatory potential of different theories to make sense of violent death, paying particular attention to forensic and medicolegal system to determine suicide and solve homicides. Review of historic and contemporary studies to examine how research and conceptualizations of suicide and homicide have changed, as well as social responses to these phenomena. P/NP or letter grading.

141A. Migration and Labor in Mexico-U.S. Context. (5) Seminar, 20 hours. Mexico-U.S. migration is largest and oldest continuous international population flow of contemporary world. In recent decades, prompted by swift economic transformations, rural and urban Mexicans from every corner of Mexico have joined this migratory flow, settling well beyond southwestern region and into far-reaching areas of U.S. interior. Migration is binding U.S. and Mexico stronger than ever, putting this complex and multilayered phenomenon under the examina- tion of sociological dynamics of international migra- tion and labor as they apply to Mexico-U.S. context, including demographic, political, and economic dy- namics of migration and labor, social ramifications that support cross-border mobility, and connec- tions of migration with binational, national, regional, and local labor markets. Comparative insights to contrast this flow with other contemporary population streams. Offered in summer only. Letter grading.

141B. Migration and Labor in Mexico-U.S. Context. Research Seminar. (5) Seminar, 10 hours; field- work, 10 hours. Development of qualitative micro- study and research designs and methods in the study of migration and labor 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 basics of methodological reasoning, how to formulate research questions, and how to frame and investigate one particular issue re- lated to migration and labor. How to make ethical de- cisions about conducting research. Development of student abilities as researchers by conducting sec- ondary and primary research culminating in final re- search paper to be presented to faculty members and peers. Offered in summer only. Letter grading.

142. Healthcare in Transitional Communities. (4) (Same as Public Health M151.) Lecture, three hours; discussion, one hour. Analysis of social, cultural, eco- nomic, and political changes affecting organizations and accessibility of healthcare in transitional and dis- advantaged 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 deviation and general survey of major types of deviation in American society. P/NP or letter grading.

146. Sociology of Interpersonal Conflict. (4) Lecture, three hours; discussion, one hour. Origins, develop- ment, and resolution of conflict and the problems and troubles that arise in close relationships, households, workplaces, and public places in contemporary soci- ety. Concurrently scheduled with course C229A. 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 behaviors. P/NP or letter grading.

147B. Sociology of Criminal Justice. (4) Lecture, three hours; discussion, one hour. Examination of structure and function of the major 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. 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.

150. Sociology of Aging. (4) (Same as Gerontology M150.) Lecture, three hours; discussion, one hour. Study of sociological processes shaping definition, experience, and response to aging in contemporary society. Topics include race, class, and gender in aging life course; intergenerational relations; social worlds of aged; caregiving relations and institutions; professions concerned with aged and aging. Letter grading.

151. Comparative Immigration. (4) Lecture, three hours; discussion, one hour. Survey of immigration of Europeans, Asians, and Hispanics to the U.S. since the mid-19th century. Overview of immigration experience on ethno-racial groups that migrated voluntarily to this country, with emphasis on immediate postim- migration settlement. P/NP or letter grading.

152. Comparative Acculturation and Assimilation. (4) Lecture, three hours; discussion, one hour. Requi- site: course 151. Comparison of acculturation and assimilation of Europeans, Africans, Mexicans, and Asians in the U.S., with emphasis on long-term cul- tural consequences of immigration. P/NP or letter grading.

153. Chinese Immigration. (4) (Same as Asian American Studies M130C.) Lecture, three hours; discussion, one hour. Survey of sociological studies of Chinese immigration, with focus on international con- text, organization, and institutions of Chinese America 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.

1555. Latinos in U.S. (4) (Same as Chicana and Chicanx Studies M155.) Lecture, three hours; discussion, one hour. Designed for juniors/seniors. Exploration of history and social conditions of Latinos in Los Ange- les as well as nationally, with particular emphasis on their location in larger social structure and on compar- isons with other minority groups. Topics include mi- gration, 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 at- tention to comparison of African American and Euro- pean American experiences and to transformation of Asian American and Latino communities and the nation generally, wrought by renewal of mass migra- tion in second half of the 20th century. P/NP or letter grading.

157. Social Stratification. (4) Lecture, three hours; discussion, one hour. Analysis of American social structure in terms of evaluational differentiation. Top- ics include criteria for differentiation, types of stratification, composition of strata and status systems, mobility, consequences of stratifica- tion, and problems of methodology. P/NP or letter grading.
158. Urban Sociology. (4) Lecture, three hours; discussion, one hour. Description and analysis of urbanization and urbanism in the U.S. and world. P/NP or letter grading.

160. Intergroup Conflict and Prejudice. (4) Lecture, three hours; discussion, one hour. Study of causes and consequences of group conflict, with emphasis on mechanisms of intergroup relationships, conflict and reconciliation. Special attention to 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.


M162. Sociology of Gender. (5) (Same as Gender Studies M162.) Lecture, three hours; discussion, one hour. Enforced requisite: course 1 or Gender Studies 10. Examination of processes by which gender is socially constructed. Topics include distinction between biology and gender, gender difference and consequences of gender inequality, and recent changes in gender relations in modern industrial societies. P/NP or letter grading.

M163. Gender and Work. (4) (Same as Gender Studies M163.) Lecture, three hours. Requisite: course 1 or Gender Studies 10. Exploration of relationship of gender to work, concentrating on the U.S. experience but also looking at comparative material. Particular emphasis on analysis of causes and consequences of job segregation by gender and of wage inequality. P/NP or letter grading.

M164. Politics of Reproduction. (4) (Same as Gender Studies M164.) Lecture, three hours; discussion, one hour. Title refers to intersection between politics and life cycle. Topics include social construction of gender and population, reproductive issues, politics of mothers, motherhood, and mothering, surveillance, and new reproductive technologies. Letter grading.

M165. Sociology of Race and Labor. (4) (Same as Afro-American Studies M165 and Labor and Workplace Studies M165.) Lecture, three hours; discussion, one hour. Limited to juniors/seniors. Exploration of relationship between race/ethnicity, employment, and labor. Analysis of understanding of racial categories and divisions in workforce and how they evolved historically. Consideration of circumstances under which workers and unions have excluded people of color from jobs and unions, as well as circumstances under which they have organized people of color into unions in efforts to improve their wages and working conditions. Impact of globalization on these dynamics. P/NP or letter grading.

M166. Women in Socialist and Post-Socialist States. (4) (Same as Gender Studies M166.) Lecture, three hours; discussion, one hour. Exploration of diversity of women's lives in socialist and post-socialist states. Although transition from socialism occurs differently, gender differences are everywhere central to democratization and marketization. Discussion of ways in which state policies affect women. Letter grading.

168. Organizations and Society. (4) Lecture, three hours; discussion, one hour. Sociological analysis of organizations and their social environment. Introduction to basic theories, concepts, methods, and research on behavior in organizations. Letter grading.

169. Law and Society. (4) Lecture, three hours; discussion, one hour. Specific topics may include law in preindustrial and industrialized societies, legalization of contemporary social relations, participants' experiences of legal processes, lay perceptions of justice, social movements toward equal justice, roles of lawyers and judges, social impact of court decisions. P/NP or letter grading.

170. Medical Sociology. (4) Lecture, three hours; discussion, one hour. Requisite: course 1. Provides medical sociology as an introduction to other social sciences, as well as students preparing for health sciences careers, with understanding of health-seeking behavior and interpersonal and organizational relations that are involved in receipt and delivery of health services. P/NP or letter grading.

171. Occupations and Professions. (4) Lecture, three hours; discussion, one hour. Description and analysis of representative occupations and professions, with emphasis on contemporary U.S. P/NP or letter grading.

172. Entrepreneurship. (4) Lecture, three hours; discussion, one hour. Description and analysis of entrepreneurship, with special reference to historical origins, legal and social aspects of women's lives in socialist and post-socialist societies, and evolution of institutions and policies that originated from studying Western societies.

182. Political Sociology. (4) Lecture, three hours; discussion, one hour. Contributions of sociology to study of politics, including analysis of political aspects of social systems, social context of action, and social bases of power. P/NP or letter grading.


184. Social Change. (4) Lecture, three hours; discussion, one hour. Course 1 recommended. Social change, resistance to change, and change-producing agencies and processes. P/NP or letter grading.

185. American Sociology. (4) Lecture, three hours; discussion, one hour. Analysis of major institutions in the U.S. in historical and international perspective, with emphasis on topics such as industrialization, work, state, politics, community, family, religion, and American culture. Theories of social change, conflict, and order applied to case of the U.S. P/NP or letter grading.

186. Latin American Societies. (4) Lecture, three hours; discussion, one hour. Social structure and social conflict in Latin America, with special attention to racial and class structures and dilemmas of economic and political development. Country and specific focus varies each term. P/NP or letter grading.

191A. Undergraduate Seminar: Self and Identity. (8) Seminar, three hours. Limited to junior/senior Sociology majors. Reading, discussion, and presentation of original empirical research based on experiences from Washington, DC-based field placements. Study of variety of qualitative methods (observation, interviewing, etc.) with comparative quantitative analysis. Examination of features of solid and significant research; intensive writing. Letter grading.


M191DC. CAPPP Washington, DC, Research Seminars. (8) (Same as History M191DC and Political Science M191DC) Seminar, three hours. Laboratory, 24 hours. Limited to CAPPP Program students. Seminars for undergraduate students in Center for American Politics and Public Policy's program in Washington, D.C. Focus on discussion of original empirical research based on experiences from Washington, DC-based field placements. Study of variety of qualitative methods (observation, interviewing, etc.) with comparative quantitative analysis. Examination of features of solid and significant research; intensive writing. Letter grading.

191F. Undergraduate Seminar: Sociology of Globalization. (5) Seminar, three hours. Limited to juniors/seniors. Great extension of social relations across global cities in the last 50 years. What are causes and mechanisms of this process, how far has it transformed human societies, and how far will it go in future? Economic, cultural, political, and military aspects of globalization. Focus on extent to which new expansion of capitalism, nation-state system, and American imperialism reinforce or undercut each other, producing new lines of division and conflict across discussion and development of culminating project. Letter grading.

191H. Honors Seminars: Sociology. (4) Seminar, three hours. In-depth introduction to process of producing scholarly sociological research for students who intend to write undergraduate thesis for departmental honors. Letter grading.

191L. Undergraduate Seminar: Health and Inequality. (5) Seminar, three hours. Limited to juniors/seniors. During past century, social inequalities in health and survival have widened 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.

191M. Undergraduate Seminar: Cigarettes and Western Civilization — Sociological History of Smoking. (5) Seminar, three hours. Limited to juniors/seniors. Sociology of habit of tobacco and cigarette smoking to explore important themes in sociology, history, and culture. History of tobacco from its roots in Native American culture, its contribution to foundation of European colonies in New World, its cultural incorporation in western Europe, its role in rise of industrial trial of life and health consequences, and its demise as legitimate soft drug for modern urban people. Letter grading.


191O. Undergraduate Seminar: Urban and Suburban Sociology. (5) Seminar, three hours. Limited to juniors/seniors. Sociology of urban and suburban society. Also known as human ecology. Study of adaptation of social systems, urban politics, house and architectural styles, including New York's famous skyscrapers, historic preservation, crime and police departments, gentrification, race, poverty, public housing, and search for affordable housing. Offered in summer only. Letter grading.


191Q. Undergraduate Seminar: IDeals of Love in Historical Perspective. (5) Seminar, three hours. Limited to juniors/seniors. Selection of topics of sociological interest. Reading, discussion, and development of culminating project. Letter grading.

191R. Undergraduate Seminar: Models. (5) Seminar, three hours. Limited to juniors. Sociology of modeling techniques and their role in society. Topics include modeling of social phenomena, policy-making, and social science. Letter grading.

191S. Undergraduate Seminar: War and Society. (5) Seminar, three hours. Limited to juniors/seniors. Study of relations 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, bureaucratic corruption, logistics, total war, guerrilla war, terrorism, and counterinsurgency. Reading, discussion, and development of culminating project. Letter grading.

191T. Undergraduate Seminar: Politics of War. (5) Seminar, three hours. Limited to juniors/seniors. Study of political issues in war and society. Topics include the role of government, military, and civil society in war. Letter grading.

191V. Variable Topics Research Seminars: Sociology. (3-4) Seminar, three hours. Limited to juniors/seniors. Study of selected topics of sociological interest. Letter grading.

191W. Undergraduate Seminar: Travel Study Program. Cutting-edge urban issues in country's largest city, including New York's attempt to plan for city of 8.2 million, rebuilding of World Trade Center, Robin Hood, and the future. Letter grading.

191X. Undergraduate Seminar: Sociology of (Same as History M195DC and Political Science M195DC.) Tutorials. Four hours. Limited to junior/senior CAPPP Program students. Emphasis on direct contact with empirical materials and development of observational and analytic skills. Reading, discussion, and development of culminating project. Letter grading.

191Y. Undergraduate Seminar: Research Group Seminars: Sociology. (2) Seminar, two hours. Limited to students who are part of research group. Discussion of research methods and current literature in field. May be repeated for credit. P/NP or letter grading.

194C. CAPP Program Seminars. (4) Course, four hours. Limited to junior/senior CAPPP Program students. Emphasis on direct contact with empirical materials and development of observational and analytic skills. Examination of features of solid and significant research; intensive writing. Letter grading.

195C. Community and Corporate Internships in Sociology. (4) Tutorial, three hours. Limited to seniors. Internship in community agency or business to be supervised jointly by community Learning and faculty advisor. Students meet on regular basis with instructor and provide weekly reports of their experiences. Normally only 4 units of internship are allowed. Individual contract with supervising faculty member required. P/NP or letter grading.

195D. CAPP Program Seminars. (4) Course, four hours. Limited to junior/senior CAPPP Program students. Emphasis on direct contact with empirical materials and development of observational and analytic skills. Examination of features of solid and significant research; intensive writing. Letter grading.


198D. Directed Research in Sociology. (2 to 4) Tutorial, one hour. Preparation: 3.0 grade-point average in major. Requisites: courses 1, M18. 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 a 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. 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. Required of first-year graduate sociology students. Examination of interrelations of theory, method, and substantive empirical 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 within or across 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 kinship. S/U or letter grading.

M206. Understanding Fertility: Theories and Methods. (4) (Same as Community Health Sciences M222.) Lecture, three hours. Preparation: one formal or social demography course. Requisite: Biostatistics 10GA. Application of demographic theories and methods to the study of trends and differentials in fertility and social and proximate determinants of fertility, with emphasis on understanding key proximate determinants. For advanced students interested in population, demography of health, and social demography. Letter grading.


210A-210B. Intermediate Statistical Methods I, II. (4-4) Lecture, three hours; discussion, two hours. Intermediate statistical methods using computers: probability theory, sampling distributions, 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 techniques fail. Correlation, regression, variance, covariance, contingency tables, sampling theory. 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 to social research, logic of comparative and historical analysis, and substantive paradigms of comparative and historical analysis. Reading involves methodological examination of basic works in representative 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 review, content analysis, collective biography, and secondary analysis.

212A. Quantitative Data Analysis. (4) Lecture, three hours; discussion, one hour. Enforced requisites: courses 210A, 210B. Course 212A is enforced requisite to 212B. Analysis and interpretation of primarily nonexperimental quantitative data, with focus on sample survey and census data. Extensive practice at utilizing statistical methods encountered in previous courses, culminating in term paper proposal in style of American Sociological Review or similar journal article. Topics include simple tabular analysis, correlation, log-linear analysis, ordinary least squares regression, multiple regression, and analysis of diagnostic procedures, and methods for handling complex sample survey designs. In Progress grading (credit to be given only on completion of course 212B).

212B. Quantitative Data Analysis. (4) Lecture, three hours; discussion, one hour. Enforced requisite: course 212A. Analysis and interpretation of primarily nonexperimental quantitative data, with focus on sampling and survey designs. Emphasis on practice at utilizing statistical methods encountered in previous courses, culminating in term paper in style of American Sociological Review or similar journal article. Topics include fixed effects and propensity score matching; and primers on advanced topics, including structural equations and multilevel models. S/U or letter 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 designs for specific analytic goals, as well as their comparative strengths and weaknesses. S/U or letter grading.

213. Applied Event History Analysis. (4) (Formerly numbered M213B.) Lecture, three hours. Preparation: exposure to binary response models. Requisites: courses 210A, 210B. Introduction to regression-like analyses in which outcome is time to event. Topics include logit models for discrete-time event history models; piecewise exponential hazards model; proportional hazards model; parametric logistic and proportional survival models; heterogeneity; multilevel survival models. S/U or letter grading.

213A. Introduction to Demographic Methods. (4) (Same as Biostatistics M208, Community Health Sciences M208.) Lecture, three hours. In Progress (213A) and S/U or letter grading. 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.

220. Self and Society. (4) Lecture, three hours; discussion, two hours. Enforced requisite: course 100A. History of survey method; facet method of data collection – planning and management; network, snowball, and experience sampling; multistage probability sampling, stratification and clustering. Students participate in survey research project. Letter grading.


221B-221C. Ethnographic Fieldwork. (4-4) Seminar, three hours. Recommended requisite: course 221A. Topics include theories and techniques of anthropological fieldwork, and challenges of transforming ethnographic data into ethnographic writing. S/U or letter grading.


222A. Phenomenological and Interactionist Perspectives on Selected Topics. (4) Lecture, three hours. Comparison of phenomenological and symbolic and bicultural perspectives by examining particular body of literatures concerned with the self, specific social institutions, and specific social problems. Topics vary; attention on development of phenomenological and interactionist thought on topic of concern, with special concern for anticipated complexities and divergences both within and across approaches. When relevant, attention to logical and historical relations of phenomenology and interactionism of pragmatist, existentialist, and ordinary language philosophies. S/U or letter grading.

M225A. California Population Research Topical Seminar Series. (4) (Same as Economics M204A.) Seminar, three hours. Examination of issues such as demography, health, aging, labor, and broad array of topics concerned with fertility, health, wealth, and political and social transformations on human behavior both in U.S. and abroad. May be taken independently for credit. S/U grading.


228. Critical Issues in Macroeroscopy. (4) Lecture, three hours. Conceptual introduction to area of macroeroscopy in which exemplary works are read, studied for substance and methods, and critiqued in seminar and in written papers. S/U or letter grading.

C229A. Sociology of Interpersonal Conflict. (4) Lecture, three hours; discussion, two hours. Origins, development, and outcomes of interpersonal conflicts and troubles that arise in romantic relationships, households, workplaces, and public places in contemporary societies. Concurrently scheduled with course C146. Letter grading.

229B. People-Processing Institutions. (4) Lecture, three hours. Discussion of institutional processes that are not requisite to 229B. Theory and research analyzing operation and decision-making processes of variety of people-processing institutions, including police, courts, schools, psychiatry, and 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 ethniciy, race, and nationalism through close reading of key theoretical and empirical works. S/U or letter grading.

230C. Comparative Ethnicity, Race, and Nationalism. (4) Seminar, three hours. Introduction to comparative and historical sociology of race and ethnicity to demonstrate merits of double comparative approach to race, one that strives to be as comparative at level of theory (attending to relationship between race and ethnicity) as it does at level of research. Exploitation 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 relation of class structure to politics and political power. Issue of salience of class versus other identities such as gender, race, and ethnicity. Letter grading.
232. 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 attention to, and sociological perspectives on power, theory of state, and relationship of class structure to politics. S/U or letter grading.

233. Sociology of Development. (4) Seminar, three hours. Designed for graduate students. 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.

234. Sociology of Race and 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, pluralist, primordialist, and rational choice perspectives. Letter grading.

236A-M236B-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 emphasis on exploring both theoretical and empirical data and case studies on which those debates hinge, to encourage students to undertake research in field. S/U or letter grading.

236C. (4) Lecture, three hours. Designed for students beginning or undertaking original research in field of international migration. Outside lectures, oral presentations of student projects, circulation of completed or draft student papers. S/U or letter grading.

237. Seminar: Theory and Research in Comparative Social Analysis. (2) Seminar, two hours. Designed for graduate students. Emphasis on one issue of particular importance for comparative analysis of capitalism in Europe, the Americas and Western Europe, developed capitalist and socialist countries and Third World, and implications for theory construction and social research. S/U grading.

238. Feminist Theory. (4) (Same as Gender Studies M238.) Seminar, three hours. Designed for graduate students. Analysis of current American feminist theory relevant to sociologists. Exploration of critiques of second wave feminism by working class feminists and feminists of color; feminist scholars from other countries, and recent “antifeminist” feminists. Discussions of direction for future feminist sociology. Letter grading.

239A-239B-239C. Social Stratification, Mobility, and Inequality. (4-4-4) Lecture, three hours. Enforced requisites: courses 210A, 210B. Course 239A is enforced requisite to 239B. Introduction to literature on social stratification, mobility and inequality in U.S. and abroad, with focus on concepts, data, methods, and facts about occupational and class structure; intergenerational transmission of socioeconomic status; effects of class and race on labor market opportunities; social economic achievement, careers, and inequality; earnings, incomes, and wealth distribution; poverty; social mobility; socioeconomic factors and marriage; gender and ethnic characteristics in health disparities. In Progress (239A) and letter (239B) grading.

241. Theories of Gender in Society. (4) Lecture, one hour; discussion, two hours. Gender stratification in society and sociology; extent of gender diversity in human societies past and present; why gender is absent in classical macrosociology; can masculinist paradigms sustain space for gender or does feminized sociology necessitate fresh approach? S/U or letter grading.

M242. Analysis of Data with Qualitative and Limited Dependent Variables. (4) (Same as Statistics M242.) Three hours. Enforced requisites: courses 210A and 210B, or Statistics 100A, 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. S/U or letter grading.

244A-244B-244C. Conversation Analysis I, II, III. (6-6-6) Lecture, three hours; discussion, two hours. S/U or letter grading. 244A. Introduction to some structures basic to organization of conversational interaction: turn-taking organization and sequence organization. 244B. Requisite: course 244A. Continuation of introduction to some structures basic to organization of conversational interaction: organization of repair, and practices of word selection and reference to persons, places, time, and action. 244C. Requisites: courses 244A, 244B. Introduction to some structures basic to organization of conversational interaction: practices of action formation, storytelling organization, and overall structural organization of single conversations.

245. Cultural Sociology: Classical and Contemporary Approaches. (4) Lecture, one hour; discussion, two hours. Exploration of classical approaches to cultural dimension of social life — Weberian, Durkheimian, Parsonsian, and critical — and living traditions they have spawned. Examination of contemporary efforts at constructing new cultural sociology. Theoretical focus, with consideration of case studies. S/U or letter grading.

246. Sociology of Culture. (4) Seminar, three hours. Theoretical and methodological issues in structural approaches to culture. Perspectives include cultural economics, political economy, and production of culture, S/U or letter grading.

247. Sociology of Emotions. (4) Lecture, two hours; discussion, one hour. Designed for graduate students. Sociological theories of emotional expression; experiential approaches to emotions: motivational, cognitive, psychophysiological, and behavioral; represssion, social oppression, and emotions; creativity and expressed affect; thought, sensations, and emotions; specific emotions culture and emotional expression; emotional expression; measurement of emotions. Letter grading.

248. Selected Topics in Culture and Society. (4) Seminar, three hours. Designed for graduate students. Seminar on topics of special interest to faculty and students. Consult Schedule of Classes for topics and instructors. May be repeated for credit. S/U or letter grading.

249A. Health Professions. (4) (Same as Community Health Sciences M249A.) Lecture, three hours. Requisite: course 210A. Sociological examination of concepts “health” and “illness” and role of various health professionals, especially physicians. Attention to meaning of professionalization and professional/client relationships within range of organizational settings. Letter grading.

M249B. Health and Illness Behavior. (4) (Same as Community Health Sciences M249B.) Lecture, three hours. Designed for graduate students. Seminar discussion based on student responses to readings on medicalization, health promotion as moral enterprise and consumption, and precapitalization of body. S/U or letter grading.

250. Sociology of Health. (4) Seminar, three hours. Exploration of literature of human health as product of society. Macro focus and micro focus used to examine social, demographic, and institutional features of national society (culture, economy, politics) while maintaining awareness of micro pathways that link these wider influences to personal experience (mind, body, emotion). Main focus on modern industrial societies and organized around many leading issues in sociology of health. S/U or letter grading.

M252. Selected Topics in Sociology of Gender. (4) (Same as Gender Studies M252.) Lecture, two hours; discussion, two hours. Designed for graduate students. Seminar on selected topics in sociology of gender. May be repeated for credit. Letter grading.

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.

M255. Cross-Cultural Perspectives on Gender. (4) (Same as Gender 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-culturally? S/U or letter grading.


257. Demography of Marriage Formation and Dissolution. (4) (Same as Community Health Sciences M257.) Lecture, three hours. Requisite: course 248. 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.

C258. 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.

260. Economy and Society. Discussion, two hours. (Same as Afro-American Studies M260.) Seminar, three hours. Exploration of social, economic and historical forces that affect socialization, stability, and interaction in black intimate relationships, beginning with theoretical framework from black feminism to analysis of economic and other expectations for partners in cohabitation and other types of unions. Examination of family life for both middle-class and low-income populations. Exploration of notions of black sexuality, including images of hyper-masculinity and femininity within black body and critical interrogation of notions of blackness and authenticity in racial identification. Contribution to greater understanding of black intimate relationships in different contexts, including lesbian and gay identities, Caribbean and other ethnic identities, and interclass intimacies. S/U or letter grading.

M263. Social Demography of Los Angeles. (4) (Same as Community Health Sciences M263.) Lecture, three hours. Designed for graduate students. Use of city of Los Angeles to examine major social and demographic factors that characterize cities in the U.S. Examination of role of these factors in affecting health outcomes. Letter grading.


266. Selected Problems in Analysis of Conversational Interaction. (4) Lecture, three hours. Requisites: courses 244A, 244B, 244C. Variable topics course. Consult instructor for topics and formats to be offered in specific term. May be repeated for credit with topic change. S/U or letter grading.
268. Selected Problems in Psychoanalytic Sociology. (4) Discussion, three hours. Recommended preparation: at least one year of methods courses. Selected problems in interpretation of sociology and psychoanalysis, which may be substantive (group development, socialization, culture, deviance, collective behavior) or methodological; latter focuses on clinical fields or areas of psychoanalytical use of psychodynamic and sociological techniques. S/U or letter grading.


M270. Interdisciplinary Relationship Science. (4) (Same as Anthropology M295S, Education M297, and Psychology M253L) Lecture, three hours. Limited to graduate students. Diverse approaches to relationship science in fields of anthropology, education, psychology, and sociology. First term will focus on themes of understanding biological, behavioral, and cultural aspects of relationships through diverse theoretical and methodological approaches. Use of broad definition of interpersonal and social 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.

M275. Contemporary Issues of American Indians. (4) (Same as American Indian Studies M200C and Anthropology M269) Seminar, three hours. Introduction to most important issues facing American Indians as individuals, communities, tribes, and organizations in contemporary world, building on historical background presented in American Indian Studies M200A and current experience of minority nationalities, class struggle under socialism, etc. (3) China and Japan: two models of development. S/U or letter grading.

276. Selected Topics in Sociology of East Asia. (4) Lecture, three hours. Designed for graduate students. Selected problems in comparative sociological study of Latin America. Possible topics include social movements, race and ethnicity, stratification, and social development. Letter grading.

M280. Trafficking, Gender, Health, and Human Rights. (4) (Same as Law M577) Seminar, four hours. Review and critical assessment of diverse literature on international traffic in persons, with emphasis on significance of sociological, legal, and gender aspects of trafficking. Primary focus on trafficking for sex work and blunted lines between discourse on commercial sex trade and trafficking. Additional issues include role of political and economic transition, militarization, health implications of trafficking, trafficking for nonsexual labor, and role of advocacy. S/U or letter grading.

281. Selected Problems in Mathematical Sociology. (4) Lecture, three hours. Exploration of selected mathematical models of sociological processes. Possible topics include models of small groups, social mobility, kinship relations, organizations, social interaction. S/U or letter grading.

282. Sociology of Medicine. (4) Seminar, three hours. Review of major concepts and issues in sociology of medicine. Topics include medicine, culture, and capitalism, professions and power, challenge of managed care, sick role and social control, interactions, and negotiation of sickness, sickness and self, debates over medicalization and demedicalization. Designed as preparation for field examination in sociology of health and medicine and specifically for themes traditionally included under medical sociology/sociology of medicine. S/U or letter grading.

283. Communication in Medical Care. (4) Seminar, three hours. Review and development of empirical knowledge about doctor-patient relationship. Analysis of nature and dynamics of routine office visits, with focus on nature and role of norms in regulating doctor-patient conduct, role of expertise and power in doctor-patient relationship, and methodological questions concerning how doctor-patient relationship can be analyzed. S/U or letter grading.


287. Topics in Chinese Sociology. (4) Seminar, three hours. Preparation: at least two upper division courses on China in any social sciences discipline. Introduction to current research questions in Chinese sociology, as well as major themes in study of Chinese sociology, 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. Practice in Conversation Analysis. (2-4) Requisites: courses 244A, 244B. S/U grading.

289A. Data Analysis, Laboratory, two hours. Practice in analysis of conversational data. May be repeated for credit. 289B. Developing Work in Progress. Seminar, three hours. Opportunity to advance research projects in progress and to develop skills of constructive criticism in discussing work of others. S/U grading.

M290A-M290B. Immigration, Racial Change, and Education in 21st-Century Metropolis. (4-4) (Same as Education M298A-M298B, Political Science M287A-M287B, and Public Policy M289A-M289B) Seminar, four hours. Examination of metropolitan American society and institutions at beginning of 21st century. Consideration of best available information on patterns of immigration and shifting functions of urban and suburban space, and issues of opportunity linked to urban structure in society facing unprecedented demographic change that will end primarily European membership of society by mid-century, creating democracy with no racial or ethnic majority. How does 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 intergenerational mobility. In Progress (M290A) and Letter (M290B) grading.


295. Working Group in Sociology. (1 to 4) Discussion, two hours. Variable topics, including sociology of gender; ethnography; social networks; race, ethnicity, immigration; 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 grading.

C297. Urban and Suburban Sociology. (5) 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, questions of gentrification, immigration, urban culture (especially art, 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 theoretical and research in topics related to interplay of culture and society, whether social, 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 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. Supervised Teaching of Sociology. (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.

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.


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., M.A., and Ph.D. programs 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

Two of the majors in the Spanish and Portuguese Department are designated capstone majors: Spanish, and Spanish and Community and Culture.

For the Spanish major, seniors complete a capstone seminar that provides unique opportunity to work closely with a faculty member on a focused topic of research. Through their capstone work students are expected to demonstrate mastery of the Spanish language, along with specific skills and expertise acquired in earlier coursework. Additionally, students acquire a working knowledge of scholarly discourse relative to a specialized topic, conceive and execute an associated project, and engage with a community of scholars, presenting their work to peers and helping to further peers’ work through discussion and critique.

For the Spanish and Community and Culture major, undergraduate students participate in community-based experiential learning courses coupled with elective and adjunct courses. Reflective journals, final projects, and in-class presentations are required. Through their capstone work, students should have mastery of the Spanish language, ability to conduct and interpret research to determine the needs of specific communities, critical understanding and ability to apply theories within a service context, sensitivity to diversity and cultural 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 more information.

No credit is allowed for completing a less advanced course after successful completion of a more advanced course in Spanish and Portuguese grammar and/or composition.

Spanish B.A.

Capstone Major

Preparation for the Major

Required: Spanish 25 or 27 or equivalent, and 42 and 44 or equivalent as determined by the undergraduate adviser. Each course must be passed with an average grade of C or better prior to beginning upper division work in the major.

Transfer Students

Transfer applicants to the Spanish major with 90 or more units must complete the following introductory courses prior to admission to UCLA: two years of Spanish, one Spanish civilization course, and one Spanish American civilization course.

Refer to the UCLA Transfer Admission Guide at http://www.admissions.ucla.edu/prospect/admission.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 191C).

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/admission.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, 150, 155C, 160, 170, 175, 195; (3) two interdisciplinary studies courses selected from Chicana and Chicano Studies 100SL, CM 106, M119, 120, M121, M122, 131, M144, 149, 181, Sociology M155; (4) two capstone community-based and experiential learning courses (8 to 10 units) selected...
from Chicana and Chicano Studies 100SL, Spanish M165SL, M172SL.

A minimum of 46 units applied toward the major requirements must be in addition to units applied toward major or minor requirements in another department or program.

Spanish and Linguistics B.A.

Preparation for the Major

Required: Spanish 25 or 27, M35 (or Linguistics 20), 42 or 44. Each course must be passed with an average grade of C or better prior to beginning upper division work in the major.

Transfer Students

Transfer applicants to the Spanish and Linguistics major with 90 or more units must complete the following introductory courses prior to admission to UCLA: two years of Spanish, one introduction to linguistics course, and one Spanish 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) Spanish 100A, 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 27, 42 or 44, Portuguese 25 or 26 or 27 (27 recommended), and 46.

Transfer Students

Transfer applicants to the Spanish and Portuguese major with 90 or more units must complete the following introductory courses prior to admission to UCLA: two years of Spanish, one year of Portuguese, one Spanish civilization course or one 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 for up-to-date information regarding transfer selection for admission.

The Major

Required: Ten upper division courses (45 units minimum), including Portuguese 100A or 100B, 130A, 130B, and seven elective courses selected from 100A through 199. Two courses from outside the department that focus on Brazil, Portugal, or Lusophone Africa may be applied toward the major with approval of the undergraduate adviser. A minimum of eight of the 10 courses must be taught in Portuguese.

Double Majors

Through judicious use of electives, students may find it possible to secure the B.A. degree with two complete majors (e.g., Portuguese/Spanish, Portuguese/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 and must be approved by the department.

Honors Program

The departmental honors program is open to majors who have completed a minimum of six upper division major courses with a 3.7 grade-point average or better in those six courses. Eligibility is verified by the departmental counselor. On the basis of their coursework and special interests, students then consult a faculty member in that field and formulate a research project that they pursue under the faculty member’s guidance through Portuguese 198A-198B or Spanish 198A-198B.

Portuguese 198A and Spanish 198A are 4-unit courses in which students research and prepare a draft of a thesis on a selected topic; Portuguese 198B and Spanish 198B are 2-unit courses in which students complete the final thesis draft of approximately 25 to 30 pages. Approval of the honors thesis by the faculty mentor is the final requirement for departmental honors. Portuguese 198A-198B and Spanish 198A-198B may not be applied toward the majors.

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 for up-to-date information regarding transfer selection for admission.

The Major

Required: Ten upper division courses (45 units minimum), including Portuguese 100A or 100B, 130A, 130B, and seven elective courses selected from 100A through 199. Two courses from outside the department that focus on Brazil, Portugal, or Lusophone Africa may be applied toward the major with approval of the undergraduate adviser. A minimum of eight of the 10 courses must be taught in Portuguese.

Double Majors

Through judicious use of electives, students may find it possible to secure the B.A. degree with two complete majors (e.g., Portuguese/Spanish, Portuguese/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 and must be approved by the department.

Honors Program

The departmental honors program is open to majors who have completed a minimum of six upper division major courses with a 3.7 grade-point average or better in those six courses. Eligibility is verified by the departmental counselor. On the basis of their coursework and special interests, students then consult a faculty member in that field and formulate a research project that they pursue under the faculty member’s guidance through Portuguese 198A-198B or Spanish 198A-198B.

Portuguese 198A and Spanish 198A are 4-unit courses in which students research and prepare a draft of a thesis on a selected topic; Portuguese 198B and Spanish 198B are 2-unit courses in which students complete the final thesis draft of approximately 25 to 30 pages. Approval of the honors thesis by the faculty mentor is the final requirement for departmental honors. Portuguese 198A-198B and Spanish 198A-198B may not be applied toward the majors.

Mexican Studies Minor

The Mexican Studies minor allows students with an interest in Mexico to augment their major programs with courses that expose them to the history, literature, and culture of Mexico. Given Southern California’s proximity to Mexico, the demographics of Los Angeles, and the shared history of Mexico and the Southwest, the minor is a natural complement to many majors.

To enter the minor, students must have an overall grade-point average of 2.0 or better and must complete or show proficiency equivalent to two years of college-level Spanish. A petition to declare the minor should be filed with the undergraduate counselor in 5314 Rolfe Hall.

Required Lower Division Courses (8 to 9 units): Spanish 25 or 27, and one course from History 8A, 8B, 8C, or Spanish 44.

Required Upper Division Courses (20 to 22 units): Three Mexican culture and literature courses selected from Spanish 135 through 175 in consultation with the undergraduate adviser and two courses from Anthropology 114P, 114Q, Chicana and Chicano Studies M102, M108A, 120, M125, 132, 142, 172, 184, Ethnomusicology M108A, Geography 181, History 157B, 160B.

By petition and after consultation with the undergraduate adviser, one 4-unit 197 or 199 course may be applied toward the minor. A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor.

Each minor course must be taken for a letter grade, and students must have an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

Portuguese Minor

To enter the Portuguese minor, students must have an overall grade-point average of 2.0 or better and must complete Portuguese 27 or equivalent.

Required Lower Division Courses (9 units): Portuguese 25 or 26 or 27 (27 recommended), and 46.

Required Upper Division Courses (20 units): Five courses selected from Portuguese 100A through 199, three of which must be taught in Portuguese. Only one 4-unit Portuguese 197 or 199 course may be applied toward the minor. A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor.

Each minor course must be taken for a letter grade, and students must have an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.
Spanish Minor
To enter the Spanish minor, students must have an overall grade-point average of 2.0 or better and must complete or show proficiency equivalent to two years of college-level Spanish.

Required Lower Division Courses (9 units): Spanish 25 or 27, and 42 or 44.

Required Upper Division Courses (20 to 22 units): Spanish 119 or 120 and four Spanish literature, culture, linguistics, service learning, or media studies courses.

By petition and after consultation with the undergraduate adviser, one 4-unit 197 or 199 course may be applied toward the minor.

A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor.

Each minor course must be taken for a letter grade, and students must have an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

Spanish Linguistics Minor
To enter the Spanish Linguistics minor, students must have an overall grade-point average of 2.0 or better and must complete or show proficiency equivalent to two years of college-level Spanish.

Required Lower Division Courses (9 units): Spanish 25 or 27, and M35.

Required Upper Division Courses (20 to 21 units): Spanish 100A, 100B, and three upper division Spanish electives, two of which must be from Spanish 160.

By petition and after consultation with the undergraduate adviser, one 4-unit 197 or 199 course may be applied toward the minor.

A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor.

Each minor course must be taken for a letter grade, and students must have an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

Graduate Study
Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website, http://grad.ucla.edu/gasaaa/ library/pgmrgintro.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 (M.A.) degree in Spanish, Master of Arts (M.A.) degree in Portuguese, and Candidate in Philosophy (C.Phil.) and Doctor of 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 1, P/NP or letter grading.

8A-8B. Portuguese Conversation. (2-2) Discussion, three hours. Enforced requisite: course 3 with grade of B or better. P/NP or letter grading.

11A-11B. Intensive Portuguese, (5-5) Formerly numbered 102A-102B. Lecture, six hours. Preparation: foreign language experience (other than Portuguese). Development of speaking and reading skills equivalent to that of four years of high school Spanish. P/NP or letter grading.

25. Advanced Portuguese, (4) Lecture, three hours. Enforced requisite: course 3 or 111B. P/NP or letter grading.

25A. Advanced Portuguese: Summer Course. (4) Lecture, 20 hours. Enforced requisite: course 3 or 11B. Advanced Portuguese course with cultural activities, field trips, and luncheons. Offered in summer only. P/NP or letter grading.


26A. Language and Popular Culture: Summer Course. (4) Lecture, 20 hours. Enforced requisite: course 3 or 11B. Development of speaking, reading, and writing skills. Structured in thematic units, with songs, videos, and specific vocabulary emphasizing questions of Brazilian cultural identity. Includes cultural activities, field trips, and luncheons. Offered in summer only. P/NP or letter grading.

27. Advanced Composition and Style. (4) Formerly numbered 105. Lecture, three hours. Requisite: course 3 or 11B. Practice in writing Portuguese with appropriate vocabulary, syntactical structures, and stylistic patterns. P/NP or letter grading.

27A. Advanced Composition and Style: Summer Course. (4) Lecture, 20 hours. Enforced requisite: course 3 or 11B. Practice in writing Portuguese with appropriate vocabulary, syntactical structures, and stylistic patterns. Includes cultural activities, field trips, and luncheons. Offered in summer only. P/NP or letter grading.

M35. Spanish, Portuguese, and Nature of Language. (5) Same as Spanish M35. Lecture, three hours; discussion, one hour. Introduction to language study within context of Romance languages, focusing on Spanish and Portuguese. Nature of language: structure, diversity, evolution, social and cultural settings, literary and popular use 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


130A-130B. Introduction to Literature in Portuguese, (4-4) Lecture, three hours. Requisite: course 27. Introduction to principal themes, currents, and authors from Brazil in context of Portuguese-speaking world. P/NP or letter grading.

141A. Literature and Film in Portuguese. (4) Lecture, three hours. Taught in English. Study of intertextuality and dialogism, interactions between literary and cinematic fields, question of fidelity, and equivalents between literary and cinematic expression in Portuguese-speaking world. May be repeated for credit with topic change. P/NP or letter grading.

141B. Film, Television, and Society in Brazil. (4) Lecture, three hours. Taught in English. Study of development, evolution, and impact of film and television in Brazil against backdrop of broader social, historical, and cultural contexts. May be repeated for credit with topic change. P/NP or letter grading.

141C. Documentary Film. (4) Lecture, three hours. Taught in English. Overview of documentary film production in Portuguese-speaking world, with special focus on period since 1985. May be repeated for credit with topic change. P/NP or letter grading.

142A. Brazil and Its Culture. (4) Lecture, three hours. Taught in English. Exploration of roots of contemporary Brazil through study of broad chronological periods from Portuguese colonization to present and how they shaped idea of Brazilian exceptionalism, racial mixture as source of national identity, and lusotropicalism and its influence on Brazilian historiography. May be repeated for credit with topic change. P/NP or letter grading.

142B. Brazil and Portugal in Comparative Perspective. (4) Lecture, three hours. Taught in English. Study of social and cultural links between Portugal and Brazil, with emphasis on issues of migration, dialogue, and contention in historical context. May be repeated for credit with topic change. P/NP or letter grading.


143A. Colony, Intellectuals, and History. (4) Lecture, three hours. Enforced requisite: course 27. Investigation of way that Brazilian maritime expansion from 15th to early 19th century was represented and interpreted in writings from across empire. May be repeated for credit with topic change. P/NP or letter grading.

143B. Transatlantic Literature in Portuguese. (4) Lecture, three hours. Enforced requisite: course 27. Study of modern relations between Portugal and Portuguese-speaking world in literature and arts. May be repeated for credit with topic change. P/NP or letter grading.

143C. Modernism, Modernity, and Identity. (4) Lecture, three hours. Enforced requisite: course 27. Examination of concepts and practice of modernism in Portuguese-speaking world, with primary focus on 1920s. Reading and discussion of emphasis on sociohistorical context, relations with European avant-garde, modernist poetics and polemics, and search for national identity as expressed in period’s poetry and prose. May be repeated for credit with topic change. P/NP or letter grading.
M200. Contemporary Literature in Portuguese. (4) Lecture, three hours. Enforced requisite: course 27. Exploration of concepts between literatures of Angola, Brazil, and Portugal against background of globalization and Internet. May be repeated for credit with topic change. P/NP or letter grading.

187FL. Special Studies: Readings in Portuguese. (2) Seminar, two hours. Requisite: course 27. Must be concurrently enrolled in affiliated main course. Additional work in Portuguese to augment work assigned in main course, including reading and writing assignments. May be repeated for credit. P/NP or letter grading.

191. Undergraduate Variable Topics Seminars: Portuguese. (4) Seminar, three hours. Requisite: course 27. 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. May be repeated for credit. P/NP or letter grading.

197. Individual Studies in Portuguese. (2 to 4) Tutorial, to be arranged. Individual intensive study, with scheduled meetings to be arranged between faculty member and student. Assigned reading and tangible evidence of subject mastery required. Eight units of courses 197 and/or 199 may be applied toward major requirements. May be repeated for maximum of 8 units. Individual contract required. P/NP or letter grading.

198A-198B. Senior Honors Research in Portuguese I, II. (4-2) Tutorial, to be arranged. Preparation: completion of minimum of six upper division major core courses with 3.7 grade-point average. Course 198A is enforced requisite to 198B. Limited to juniors/seniors. Development and completion of honors thesis under direct supervision of faculty member. May not be applied toward major requirements. Individual contract required. Letter grading.

199. Directed Research in Portuguese. (2 to 4) Tutorial, to be arranged. Requisite: course 27. Limited to juniors/seniors. Supervised individual research under guidance of faculty mentor. Cullminating 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.

M205A-M205B. Development of Portuguese and Spanish Languages. (4-4) (Same as Spanish M205A-M205B) Lecture, three hours. Intensive study of history of development of Portuguese and Spanish languages from their origin in spoken Latin.


229. 20th-Century Portuguese Literature. (4) (Formerly numbered C229.) Lecture, three hours. Enforced requisite: course 27. Study of representative trends and authors. May be repeated for credit with topic change. S/U or letter grading.

231. Colonial Brazilian Literature and Culture. (4) (Formerly numbered C231.) Lecture, three hours. Enforced requisite: course 27. Study of representative trends and authors. May be repeated for credit with topic change. S/U or letter grading.

232. 19th-Century Brazilian Literature and Culture. (4) (Formerly numbered C232.) Lecture, three hours. Study of representative trends and authors. May be repeated for credit with topic change. S/U or letter grading.

233. Machado de Assis. (4) (Formerly numbered C233.) Lecture, three hours. Study of selected works by Joaquim Maria Machado de Assis. S/U or letter grading.

234. Brazilian Modernism. (4) (Formerly numbered C234.) Lecture, three hours. Enforced requisite: course 27. Study of principal characteristics of Brazilian modernism through representative works. S/U or letter grading.

235. 20th-Century Brazilian Literature. (4) (Formerly numbered C235.) Lecture, three hours. Enforced requisite: course 27. Study of representative trends and authors. May be repeated for credit with topic change. S/U or letter grading.

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) ballad 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, two hours. Study of problems related to historical relationships between Galician-Portuguese and Old Spanish. Each course may be repeated once with topic change and consent of appropriate guidance committee.


255. Studies in Contemporary 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. 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. (4 to 8) Tutorial, to be arranged. Study or research in areas or subjects 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.

1G. Reading Course for Graduate Students. (4) Lecture, three hours. Knowledge of Spanish not required. May not be applied toward degree requirements. S/U grading.

2. Elementary Spanish. (4) Discussion, five hours; laboratory, one hour. Enforced requisite: course 1. P/NP or letter grading.

2A. Intensive Spanish. (4) Lecture, twenty 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.

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. Enforced requisite: course 2. P/NP or letter grading.

3A. Intensive Spanish. (4) Lecture, twenty 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.


5. Intermediate Spanish. (4) Discussion, five hours; laboratory, one hour. Enforced requisite: course 4. P/NP or letter grading.


8A-8B. Spanish Conversation. (2-2) Discussion, three hours. Course 8A is open to students with credit for course 4. Students who have completed course 3 with grade of B or better may be admitted. P/NP or letter grading.

9A-9B. Advanced Conversation. (2-2) Discussion, three hours. Enforced requisite: course 8B. P/NP or letter grading.

10. Intensive Elementary Spanish. (12) Lecture, twenty hours. Intensive elementary instruction in speaking, listening, reading, and writing equivalent to courses 1, 2, 3, with emphasis on Spanish grammar and Hispanic culture. Offered in summer only. P/NP or letter grading.

10A. Preparatory Spanish. (6) Lecture, six hours. Preparation for courses 1, 2, 3. P/NP or letter grading.
11A-11B. Catalan Language and Culture I, II. (4-4)
(Formerly numbered 102A-102B.) Lecture, six hours. Introduction to the Catalan language and culture. Course 5.

11C. Catalan Language and Culture. (4)
Course 5. Two-term accelerated language sequence equivalent to three terms of traditional pattern and designed for advanced undergraduate and graduate students. P/NC or letter grading. 11A. Preparation: at least two years of college-level Spanish, Portuguese, or another Romance language other than Catalan. 11B. Requisite: course 11A.

25. Advanced Conversation and Composition. (4)
Lecture, three hours. Emphasis on communicative abilities, both verbal and written, as well as on increasing comprehension of a variety of forms of cultural production in Spanish language and on preparation for more advanced Spanish courses. P/NC or letter grading.

27. Composition for Spanish Speakers. (4)

60A. Spanish for Special Purposes: Medical. (4)
Lecture, three hours. Emphasis on medical conversations for students with special interest in fields such as medicine, business, law, etc. P/NC or letter grading.

60B. Spanish for Special Purposes: Legal. (5)
Lecture, three hours; discussion, one hour. Emphasis on legal-spanish and cultural situations for students preparing to work in the legal field. May be repeated for credit with topic change. P/NC or letter grading.

60C. Spanish Literature; Syntax. Study of syntactical systems of Spanish.

97. Variable Topics in Spanish. (2)
Course M35. Emphasis on development as background for upper division courses. P/NC or letter grading.

100A. Introduction to Methods of Analyzing Literary Work. (4) 
Course 130 prior to Fall Quarter 2010.) Lecture, three hours. Requisite: course 25. Exploration of major literary genres: lyric poetry, prose, and history of the language. P/NC or letter grading.

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. History of world literature with emphasis on the literary and linguistic diversity. Possible topics include Convivencia (peaceful coexistence), Europe and Orient, beginnings of Inquisition, oral versus written traditions, origins of Hispanic-Christian expansion beyond peninsula, and flowering of Al-Andalus. May be repeated for credit with topic change. P/NC or letter grading.

135. Topics in Modern Studies. (4)
(Formerly numbered M42.) Lecture, three hours; fieldwork, 10 hours. Emphasis on major literary movements and writers of 18th and 19th centuries in Spain and Spanish America. Possible topics include Enlightenment, Romanticism, nation-building literature, realismo y academicismo, and works by Cadales, Conoccorroco, Lizardo, Larra, Sarmiento, Bécquer, Isais, Mera, Villarvede, and Galdós. May be repeated for credit with topic change. P/NC or letter grading.

140. Topics in Contemporary Studies. (4)
(Formerly numbered 140A.) Lecture, three hours. Emphasis on 20th-century Spanish-American literature, style, national history, and works by Nabokov, Amado, and other prominent authors. P/NC or letter grading.

145A. Introduction to Chicano Literature: Literature to 1910. (4) 
(Formerly numbered 145A.) Lecture, three hours. Emphasis on major literary movements and writers of 18th and 19th centuries in Spain and Spanish America. Possible topics include Enlightenment, Romanticism, nation-building literature, realismo y academicismo, and works by Cadales, Conoccorroco, Lizardo, Larra, Sarmiento, Bécquer, Isais, Mera, Villarvede, and Galdós. May be repeated for credit with topic change. P/NC or letter grading.

160. Topics in Spanish Linguistics. (4)
(Formerly numbered 160.) Lecture, three hours; discussion, one hour. Emphasis on major linguistic structures in Spanish, with topics such as language, first- and second-language acquisition, literacy, and cognition. P/NC or letter grading.

M155A. Chicano Narrative. (4)
(Formerly numbered M145B.) Lecture, three hours. Emphasis on major Chicano narrative genres, with topics such as linguistic structures, Chicano solidarity fiction. Texts examined within their own geographic, cultural, and historical contexts, as well as within history of narrative forms. P/NC or letter grading.

M155B. Literature of Chicana/Chicana Movement. (4) 
(Formerly numbered M145B.) Same as Chicana and Chicano Studies M145B. Lecture, three hours. Emphasis on major Chicano narrative genres, with topics such as linguistic structures, Chicana solidarity fiction. Texts examined within their own geographic, cultural, and historical contexts, as well as within history of narrative forms. P/NC or letter grading.

165SL. Taking it to Street: Spanish in Community. (5)
(Formerly numbered 165SL.) Seminar, four hours; fieldwork, four hours. Emphasis on major topics related to community, literacy, and way they exist in mass media, new technologies, and different platforms. Possible topics include visual cultures in Latin America, Latin American and Spanish cinema, musical cultures and literature, live arts and performance in popular culture, and digital modeling of material culture, and architecture of medieval Iberia. May be repeated for credit with topic change. P/NC or letter grading.

M172SL. Latinos, Linguistics, and Literacy. (5)
(Formerly numbered M172SL.) Seminar, four hours; fieldwork, four hours. Emphasis on major topics related to community, literacy, and way they exist in mass media, new technologies, and different platforms. Possible topics include visual cultures in Latin America, Latin American and Spanish cinema, musical cultures and literature, live arts and performance in popular culture, and digital modeling of material culture, and architecture of medieval Iberia. May be repeated for credit with topic change. P/NC or letter grading.

175. Topics in Creative Writing and Translation. (4)
Seminar, three hours. Emphasis on major topics related to community, literacy, and way they exist in mass media, new technologies, and different platforms. Possible topics include visual cultures in Latin America, Latin American and Spanish cinema, musical cultures and literature, live arts and performance in popular culture, and digital modeling of material culture, and architecture of medieval Iberia. May be repeated for credit with topic change. P/NC or letter grading.
191A. Variable Topics in Spanish: Studies in Hispanic Literature and Linguistics. (4) Seminar, three hours. Identification of major trends in discipline. Prerequisite: 197 or permission of instructor. Variable topics course with readings, discussions, and development of culminating paper. Consult Schedule of Classes or department counselor for topic to be offered in specific term. P/NP or letter grading.


191C. Senior Capstone Seminar. (4) Seminar, three hours. Enforced requisites: courses 119, 120, and at least three upper division elective courses required for majors. Limited to senior Spanish majors. Knowledge from previous coursework used to address current trends in discipline; students work with a faculty member on one focused research topic. Culminating paper required. Letter grading.

195. Community Internships in Spanish. (4) Tutorial, one hour; fieldwork, 10 hours. Requisite: course 25 or 277, sophomore standing, and consent of appropriate guidance committee. Supervised in-service setting in community agency or business. Students meet on regular basis with instructor and provide journals. Prerequisites: course 195 must be completed with a grade of C or better. Individual contract required. Letter grading.

197. Individual Studies in Spanish. (2 to 4) Tutorial, to be arranged. Limited to juniors/seniors. Individual intensive study, with scheduled meetings to be arranged between faculty member and student. Assigned reading and tangible evidence of mastery of subject matter required. Eight units of courses 197 and/or 199 may be applied toward major requirements. May be repeated for credit. Credit/No Credit. Individual contract with supervising faculty member required. P/NP or letter grading.

198A-198B. Senior Honors Research in Spanish I, II. (4-4) Formerly numbered 198.) Tutorial, to be arranged. Preparation: completion of minimum of six upper division major core courses with 3.7 grade-point average. Course 198A is enforced requisite to 198B. Limited to juniors/seniors. Development and completion of honors thesis under direct supervision of faculty member. May not be applied toward major requirements. Individual contract required. Letter grading.

199. Directed Research in Spanish. (2 to 4) Tutorial, to be arranged. Requisite: course 25. Limited to juniors/seniors. Supervised individual research under guidance of faculty mentor. Culminating paper required. Eight units of courses 197 and/or 199 may be applied toward major requirements. Individual contract required. Letter grading.

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.

202A. Phonology. (4) Lecture, three hours. Study of the sound patterns of the Spanish and main phonological processes that map underlying representations into surface representations. Bearing of phonological theory on study of meter.

202B. Morphology. (4) Lecture, three hours. Study of derivational and inflectional word formation processes and their interaction with syntactic structure.

204A-204B. Generative Syntax and Semantics. (4-4) Lecture, three hours. Study of syntactic structure of Spanish and relation between underlying representations and logical form within a principles-and-parameters framework. Bearing of syntactic and semantic structure on study of literature.

M205A-M205B. Development of Portuguese and Spanish languages. (4-4) (Same as Portuguese M205A-M205B.) Lecture, three hours. Intensive study of historical development of Portuguese and Spanish languages from their origin in spoken Latin.

209. Dialectology. (4) Lecture, three hours. Major dialect areas of peninsular and American Spanish, with distinguishing features of each. Influence and contribution of cultural and historical features, including indigenous languages, to their formation.

221. Medieval Lyric Poetry. (4) Lecture, three hours. Readings of and lectures on Spanish lyric poetry from the beginning to 1500.

222. Medieval Epic and Narrative Poetry. (4) Lecture, three hours. Readings of and lectures on Spanish epic and narrative poetry from the beginning to 1500.

223. Medieval Prose. (4) Lecture, three hours. Readings of and lectures on Spanish prose from the beginning to 1500.

224. Poetry of the Golden Age. (4) Lecture, three hours. Readings of and lectures on Spanish poetry from 1500 to 1700.

225. Drama of the Golden Age. (4) Lecture, three hours. Readings of and lectures on the comedy.


228. The Enlightenment. (4) Lecture, three hours. Readings of and lectures on representative works of the period.

229. Romanticism. (4) Lecture, three hours. Readings of and lectures on representative works of the period.

230. Realism and Naturalism. (4) Lecture, three hours. Readings of and lectures on literary works, principally novels, from 1850 to 1898.

231. Major Currents in Modern Spanish Literature. (4) Lecture, three hours. Introduction to major literary currents, including symbolism, Parnassianism, and the Generation of 1898.

232. Spanish Prose Literature from 1898 to the Civil War. (4) Lecture, three hours. Readings of and lectures on representative essays, novels, and short stories of the period.

233. Spanish Prose Literature after the Civil War. (4) Lecture, three hours. Readings of and lectures on representative essays, novels, and short stories of the period.

234. Spanish Drama and Poetry from 1898 to the Civil War. (4) Lecture, three hours. Readings of and lectures on representative plays and poems.

235. Spanish Drama and Poetry after the Civil War. (4) Lecture, three hours. Readings of and lectures on representative plays and poems of the period.

237. Literature of the Spanish Conquest. (4) Lecture, three hours. Readings of and lectures on chronicles, poems, and indigenous accounts of the Spanish Conquest.

238. Baroque, Enlightenment, and Neoclassicism in Colonial Spanish Literature. (4) Lecture, three hours. Readings of and lectures on representative texts.


241A-241B. Contemporary Spanish-American Short Story. (4-4) Lecture, three hours. Study of important short story writers from modernism to the present.

243A-243B. Contemporary Spanish-American Poetry. (4-4) Lecture, three hours. Intensive study of important poets of Spanish America from modernism to the present.

244A-244B. Contemporary Spanish-American Novel. (4-4) Lecture, three hours. Study of important novelists from modernism to the present.


247. Chicano Literature. (4) Lecture, three hours. Study of major movements and authors of Mexican American literature.

M249. Folk Literature of Spanish and Portuguese Worlds. (4) (Same as Portuguese M249.) Lecture, three hours. Intensive study of folk literature of Spanish and Portuguese cultures as represented in (1) ballad and poetry, (2) narrative and drama, (3) speech. S/U or letter grading.

M251A-M251B. Studies in Galician-Portuguese and Old Spanish. (4-4) (Same as Portuguese M251A-M251B.) Lecture, two hours. 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.

256A-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.

257. Studies in Dialectology. (4) Discussion, two hours. May be repeated once with topic change and consent of appropriate guidance committee.

262A-262B. Studies in Medieval Spanish Literature. (4-4) Discussion, two hours. Each course may be repeated once with topic change and consent of appropriate guidance committee.

264A-264B. Studies in Golden Age Spanish Literature. (4-4) Discussion, two hours. Each course may be repeated once with topic change and consent of appropriate guidance committee.

265. Cervantes. (4) Discussion, two hours. May be repeated once with topic change and consent of appropriate guidance committee.

270A-270B. Studies in 18th-Century Spanish Literature. (4-4) Discussion, two hours. Each course may be repeated once with topic change and consent of appropriate guidance committee.

277A-277B. 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.

278A-278B. 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.
STATISTICS

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Jan de Leeuw, Ph.D.
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Mark S. Handcock, Ph.D.
Mark H. Hansen, Ph.D.
Kenneth L. Lange, Ph.D.
Edward E. Leamer, Ph.D. (Chauncey J. Medbery Professor of Management)
Ker-Chau Li, Ph.D.
Robert D. Mare, Ph.D.
Kevin F. McCardle, Ph.D.
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Christina G.S. Palmer, Ph.D., in Residence
Theodore M. Porter, Ph.D.
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William A. Clark, Ph.D.
Thomas S. Ferguson, Ph.D.
Robert J. Jennrich, Ph.D.
James B. MacQueen, Ph.D.
William M. Mason, Ph.D.
Bengt Muthen, Ph.D.
Judea Pearl, Ph.D.
Sidney C. Port, Ph.D.
N. Donald Ylvisaker, Ph.D.

Associate Professors
Janice L. Reff, Ph.D.
Catherine A. Stinnett, Ph.D., in Residence
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Assistant Professor
Hongjung Lu, Ph.D.

SPEECH
See Communication Studies

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
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.

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.

Statistics Minor

Incoming freshman and transfer students may be admitted as Statistics premajors on acceptance to UCLA. Premajors must apply for the major after completing Mathematics 33A, Program in Computing 10A, and one course from Statistics 10 through 14, with grades of C or better, and a grade-point average of 2.5. Any student who meets the premajor requirements may declare the major with the undergraduate adviser in 8117A Math Sciences, (310) 206-3742.

Preparation for the Major

Required: Mathematics 31A, 31B, 32A, 32B, 33A, Program in Computing 10A, and one course from Statistics 10 through 14. Each course must be completed with a grade of C or better. Students who repeat any preparation course more than once are automatically denied admission to the major.

Transfer Students

Transfer applicants to the Statistics major with 90 or more units must complete as many of the following introductory courses as possible prior to admission: two years of calculus, one linear algebra course, and one statistics course.

Refer to the UCLA Transfer Admission Guide at http://www.admissions.ucla.edu/prospect/adm_tr.htm 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 any upper division statistics sequences from Statistics 100A, 100B, 100C, 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.

Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website, http://grad.ucla.edu/gasaa/librarian/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 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 tools. 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. Prerequisite 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 Geographical and Environmental Studies. (5) Lecture, four hours; discussion, one hour; laboratory, one hour. Not open for credit to students with credit for course 10, 11, or 13. Introduction to statistical thinking and understanding, with emphasis on techniques used in geography and environmental science. Underlying logic behind statistical procedures, role of variation in statistical thinking, strengths and limitations of statistical summaries, and fundamental inferential tools. Emphasis on applications in geography and environmental science in laboratory work using professional statistical analysis package, including spatial statistics, P/NP or letter grading.

13. Introduction to Statistical Methods for Life and Health Sciences. (5) Lecture, three hours; discussion, one hour; laboratory, one hour. Not open for credit to students with credit for course 10, 10H, 11, 12, or 14. Presentation and interpretation of data, descriptive statistics, introduction to correlation and regression and to basic statistical inference (estimation, hypothesis tests, and proportions), ANOVA using both bootstrap 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. Not open for credit to students with credit for course 10, 10H, 11, 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 measurement, 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 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. Prerequisite: one course from 10, 11, 12, 13, or 14. Limited to 20 lower division students. Readings and discussions designed to introduce students to current statistical consulting research and fieldwork disciplines. Culminating project may be required. P/NP or letter grading.
Upper Division Courses

100A. Introduction to Probability. (4) Lecture, three hours; discussion, one hour. Requisite: 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 courses 100A, 101A, or 106A. Probability and statistical inference, with emphasis on probability models, random variables, and applications. P/NP or letter grading.

100B. Introduction to Mathematical Statistics. (4) Lecture, three hours; discussion, one hour. Requisite: course 100A or Mathematics 170A. Survey sampling, estimation, testing, data summary, one- and two- sample problems. P/NP or letter grading.

100C. Linear Models. (4) Lecture, three hours; discussion, one hour. Requisite: course 100B. Theory of linear models, with emphasis on matrix approach to linear regression. Topics include model fitting, extra sums of squares principle, testing general linear hypothesis in regression, inference procedures, Gauss/Markov theorem, examination of residuals, principle component regression, stepwise procedures. P/NP or letter grading.

101A. Introduction to Data Analysis and Regression. (4) (Formerly numbered 101B.) Lecture, three hours; discussion, one hour. Enforced requisite: course 10 or 12 or 13. 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 inference. P/NP or letter grading.

101B. Introduction to Design and Analysis of Experiments. (4) (Formerly numbered 101A.) Lecture, three hours; discussion, one hour. Enforced requisite: course 101A. Fundamentals of collecting data, including components of experiments, randomization and blocking, statistical design and ANOVA, multiple comparisons, power and sample size, and block designs. P/NP or letter grading.

101C. Introduction to Statistical Models and Data Mining. (4) Lecture, three hours; discussion, one hour. Enforced requisite: course 101B. Designed for juniors/seniors. Applied regression analysis, with emphasis on general linear model (e.g., multiple regression) and generalized linear model (e.g., logistic regression). Special attention to modern extensions of regression, including regression diagnostics, graphical procedures, and bootstrapping for statistical inference. P/NP or letter grading.

102A. Introduction to Computational Statistics with R. (4) Lecture, three hours; discussion, one hour. Requisite: course 10, Mathematics 33A. Introduction to programming and data analysis in R. P/NP or letter grading.

102B. Introduction to Computation and Optimization for Statistics. (4) Lecture, three hours; discussion, one hour. Requisite: course 100B, Mathematics 33A. Introduction to computational methods and optimization useful for statisticians. Use of computer programming to solve statistical problems. Topics include vector/matrix computation, multivariate normal distribution, principal component analysis, clustering analysis, gradient-based optimization, EM algorithm for missing data, and dynamic programming. P/NP or letter grading.


105. Statistics for Engineers. (4) Lecture, three hours; discussion, one hour. Requisite: course 100A or Electrical Engineering 170A. Foundation of basic concepts and techniques of statistics. Topics include sampling distributions, statistical estimation (including maximum likelihood estimation), statistical intervals, and hypothesis testing, with emphasis on applications to quality improvement. Discussion of methods for checking whether assumptions required for mathematical foundations are appropriate for given set of data. P/NP or letter grading.


C116. 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 from course 10, 11, 12, 13 and one upper division statistics course using regression. Designed for social sciences graduate students and advanced undergraduate students seeking training in data issues and methods employed in social sciences. Concurrently scheduled with course C216. P/NP or letter grading.

130. Getting Up to Speed with SPSS, Stata, SAS, and R. (4) (Formerly numbered 130A.) Lecture, three hours; discussion, one hour. Preparation: basic statistics, basic computer literacy. Study of four commonly employed solutions—SPSS (Statistical Package for Social Sciences), Stata, SAS (Statistical Analysis System), and R—for data analytic and statistical issues in health sciences, social sciences, and government. Emphasis on applied problem solving, measurement issues in data analysis, use of computer for analysis of large-scale data. P/NP or letter grading.

140SL. Practice of Statistical Consulting. (4) Lecture, one hour; discussion, two hours. Enforced requisite: courses 100B, 101B, 130. Limited to seniors. Opportunity to solve real data analysis problems for real community-based or campus-based clients. Students work in small groups with faculty member and client to frame client’s question in statistical terms, create statistical model, analyze data, and report results. Weekly meetings in classroom setting to study basic consulting skills, basic statistics, basic exchange ideas, and make reports. On-site visits as necessary. Courses 140SL and 141SL must be taken in consecutive terms. In Progress grading (credit to be given only on completion). P/NP or letter grading.

141SL. Practice of Statistical Consulting. (4) Seminar, one hour; research group meeting, two hours. Enforced requisite: course 140SL. Limited to seniors. Opportunity to solve real data analysis problems for real community-based or campus-based clients. Students work in small groups with faculty member and client to frame client’s question in statistical terms, create statistical model, analyze data, and report results. Weekly meetings in classroom setting to study basic consulting skills, share experiences, exchange ideas, and make reports. On-site visits as necessary. Courses 140SL and 141SL must be taken in consecutive terms. In Progress grading (credit to be given only on completion). P/NP or letter grading.


C152. Applied Geostatistics. (4) Lecture, three hours; discussion, one hour. Requisite: course 100C. 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 variance, repeated samples, confidence intervals and bias, and methods of generating efficient and precise estimates of population characteristics. Practical applications of sampling methods via lectures and hands-on laboratory exercises. Concurrently scheduled with course CM248B. P/NP or letter grading.

157. Probability and Statistics Data Modeling and Analysis using Statistics Online Computational Resource. (4) Lecture, three hours; discussion, one hour. Preparation: one elementary statistics course, computer skills, or physics, or statistics course. Recommended requisite: Program in Computing 20A. Probability and statistics topics in data-driven and interactive manner using open Internet resources and data, study designs, and applications arising from biomedicine, environmental science, and public health. P/NP or letter grading.

C160. Site-Specific Topics. (4) Seminar, three hours. Tracking of invisible flows of data through greater Los Angeles metropolitan area, with focus on small number of specific sites situated prominently in both physical and virtual (data) spaces. Documentation of kind of data that originate, terminate, or simply route through each location. Concepts of (virtual, 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 additions to data flows that could improve quality of life for inhabitants of or visitors to sites. May be repeated for credit; however, only one C160 may be applied toward major or minor requirements. Concurrently scheduled with course C260. P/NP or letter grading.

C161. Introduction to Pattern Recognition and Machine Learning. (4) Lecture, three hours; discussion, one hour. Requisite: course 100B, Mathematics 33A. Introduction to pattern analysis and machine intelligence designed for advanced undergraduate and graduate students. May not be applied toward M.S. or Ph.D. requirements. Concurrently scheduled with course C261. P/NP or letter grading.

170. Introduction to Time-Series Analysis. (4) Lecture, three hours; discussion, one hour. Requisite: course 100C or 101B. Exploration of standard methods in temporal and frequency analysis used in analysis of numerical time-series data. Examples provided throughout, and student experiment techniques discussed. P/NP or letter grading.

M171 Introduction to Spatial Statistics. (4) (Same as Geography M171.) Lecture, three hours; laboratorio, one hour. Requisite: one course from 10, 11, 12, 13, or 14. Introduction to methods of measurement and interpretation of geographic distributions and associations. P/NP or letter grading.

C173. Applied Geostatistics. (4) Lecture, three hours; discussion, one hour. Requisite: course 100C (may be taken concurrently) or 101B. Geostatistics can be applied to many problems in other disciplines such as hydrology, traffic, air and water pollution, epidemiology, ocean dynamics, geography, geology, meteorology, oceanography, meteorology, and agriculture and, in general, to every problem where data are observed at geographic locations. Acquisition of knowl-
edge from different areas that can be used to analyze real spatial data problems and to connect geostatistics with geographic information systems (GIS). Concurrency required with course 225A. P/NP or letter grading.

C180. Introduction to Bayesian Statistics. (4) Lecture, three hours; discussion, one hour. Enforced requirements: course 100B, Mathematics 32B. Designed for juniors/seniors. Introduction to statistical inference based on use of Bayes theorem, covering foundational aspects, current applications, and computational issues. Topics include Stein paradox, nonparametric Bayes, and statistical learning. Examples of applications vary according to interests of students. Concurrency required with course C236. P/NP or letter grading.

182. Fundamentals of Scientific Writing. (2) Formerly numbered C182.) Seminar, one hour. Development and perfection of student written communication skills through variety of scientific writing and reading assignments. Objectives and techniques of scientific writing and practice with different forms of professional writing. Analysis of quality of writing, including control, clarity, grammar, and mechanics. P/NP or letter grading.


186. Careers in Statistics. (1) Seminar, one hour. Discussion of applications of statistics by weekly guest speakers. How statistics is applied to legal questions, economic decisions, arts, environment, and other fields, with some emphasis on career paths in statistics. P/NP grading.


195. Community or Corporate Internships in Statistics. (4) Tutorial, four hours. Limited to juniors/seniors. Internship in supervised setting in community agency or business. Students meet on regular basis with instructor and provide periodic reports of their experiences. May be repeated for credit. Individual contract with supervising faculty member required. P/NP or letter grading.

199. Directed Research in Statistics. (1 to 4) Tutorial, one hour. Limited to juniors/seniors. Supervised individual research 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


200C. Large Sample Theory, Including Resampling. (4) Lecture, three hours. Enforced requisites: course 200B. Asymptotic properties of tests and estimators, consistency and efficiency, likelihood ratio tests, chi-squared tests, S/U or letter grading.

210A. Research Design, Sampling, and Analysis. (4) Lecture, three hours. Designed for graduate students. Basic concepts of design, randomization, factorial designs, random sampling, analysis of variance, multiple comparisons, regression estimation, survival analysis, categorical data analysis, S/U or letter grading.


210C. Advanced Modeling and Inference. (4) Lecture, three hours. Strongly recommended requisites: courses 200B, 210B. Designed for graduate students. Introduction to advanced topics in statistical modeling and inference, including Bayesian hierarchical models, missing data problems, mixture modeling, additive modeling, hidden Markov models, and Bayesian networks. Coverage of computational methods used for these models and problems, such as EM algorithm, data augmentation, dynamic programming, and belief propagation. S/U or letter grading.

212A. Statistics Programming. (4) Lecture, three hours. Topics include programming environments/languages such as UNIX, UNIX shell, Python, R, and Processing and data technologies/formats such as relational databases/SQL and XML, with emphasis on computer languages such as UNIX, UNIX shell, Python, R, and Processing and data technologies/formats such as relational databases/SQL and XML, with emphasis on computer languages such as UNIX, UNIX shell, Python, R, and Processing and data technologies/formats such as relational databases/SQL and XML.

212B. Matrix Algebra and Optimization. (4) Lecture, three hours. Recommended requisites: course 202A. Survey of computational methods that are especially useful for statistical analysis, with implementations in statistical package R. Topics include matrix analysis, multivariate regression, principal component analysis, multivariate analysis, and deterministic optimization methods. S/U or letter grading.


M211. Analysis of Data with Qualitative and Limited Dependent Variables. (4) (Same as Sociology M242.) Lecture, three hours. Requisites: courses 100A, 100B, and 100C, or Sociology 210A and 210B. Models for binary, polychotomous, 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.

C216. Social Statistics. (4) Lecture, three hours. Preparation: some knowledge of basic calculus and linear algebra. While data, models, and transmission are fundamental problems in information theory, field provides insights into fundamentally statistical problems of estimation, prediction, and model selection. Even new concepts of randomness emerge from this line of research. S/U or letter grading.

C236. Introduction to Bayesian Statistics. (4) Lecture, three hours; discussion, one hour. Requisites: course 100B, Mathematics 32B. Designed for graduate students. Introduction to statistical inference based on use of Bayes theorem, covering foundation-
al aspects, current applications, and computational issues. Topics include Stein paradox, nonparametric Bayes, and Gaussian processes. Examples of applications vary according to interests of students. Concurrently scheduled with course C180. S/U or letter grading.

M237. Data and Media Arts. (4) [Same as Design | Media Arts M237] Lecture, four hours. 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 pattern finding, and various data mining algorithms. Exploration, through discussions, of fundamental concepts like complexity and randomness. Techniques that organize data, search for patterns, and create meaningful and/or expressive representations. Letter grading.

238. Vision as Bayesian Inference. (4) Lecture, three hours. Requisite: course 100A or 200A. Formulation of vision as a searching and finding method that can be used for designing artificial vision systems. Applied to statistics, they define ideal observer models that can be used to model human performance and serve as a benchmark. Letter grading.

M239. Probabilistic Models of Cognition. (4) [Formerly numbered 239.] [Same as Computer Science M278] Seminar, three hours; discussion, one hour. Requisite: course 100B, Computer Science 180, Mathematics 107, or 188; upper-division aspects of human cognition, designing artificial intelligence systems. Introduction to conceptual foundations and basic mathematical and computational techniques. Topics illustrated in different aspects of cognition. S/U or letter grading.


M241. Current Topics in Causal Modeling, Inference, and Reasoning. (4) [Same as Computer Science M262C.] Lecture, four hours. Requisite: one graduate probability or statistics course such as course 100A or 108B. Bayesian view of Bayesian networks, causal Bayesian networks, and structural equations. Learning causal structures from data, identifying causal effects. Covariate selection and instrumental variables in linear nonparametric models. Simpson paradox and confounding control. Logic and algorithmization of counterfactuals. Probabilities of counterfactuals. Direct and indirect effects. Probabilities of causation, identifying causes of events. Letter grading.

M242. Multivariate Analysis with Latent Variables. (4) [Same as Political Science M208D and Psychology M257.] Lecture, three hours. Introduction to models and methods for analysis of data hypothesized to be generated by unmeasured latent variables, including latent variable analogues of traditional methods in multivariate analysis. Causal modeling: theory testing via analysis of moment structures. Measurement models such as confirmatory, higher-order, and structured-means factor analytic models. Structural equation models, including path and simultaneous equation models. Parallel group estimation, hypothesis testing, and other statistical issues. Computer implementation. Applications. S/U or letter grading.

M243. Logic, Causation, and Probability. (4) [Same as Education C248.] Lecture, four hours. Predicated on creation of meaning: two terms of statistics or probability and statistics. Recommended requisite: Epidemiology 200C. Principles of deductive logic and causal logic using counterfactuals are developed into probability logic and probabilistic induction. Causal probability logic using directed acyclic graphs. S/U or letter grading.

M244. Statistical Analysis with Latent Variables. (4) [Same as Education M231E.] Lecture, three hours. Requisite: course 100B or 200A. Extends path analysis (causal modeling) by considering models with measurement errors and multiple indicators of latent variables. Confirmatory factor analysis, covariance structure modeling, and multiple-group analysis. Identification issues, model specification, and model building considerations. Letter grading.

M245. History of Statistics. (4) [Same as History M296G.] Seminar, three hours. History of statistics ranges 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 parts and data analysis. Letter grading.

CM248. Applied Sampling. (4) [Formerly numbered C248.] [Same as Epidemiology M216.] Lecture, three hours; discussion, one hour. Designed for upper division and graduate students in the 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 unbiased and precise estimates of population characteristics. Practical applications of sampling methods via lectures and hands-on laboratory exercises. Concurrently scheduled with course C151. S/U or letter grading.

M250. Statistical Methods for Epidemiology. (4) [Same as Biostatistics M211 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. Expansions 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 statistics as applied in life sciences, including statistical inference, patterns 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) [Same as Bioinformatics M271 and Biomathematics M271.] Lecture, three hours; discussion, one hour. Preparation: elementary probability concepts. Requisite: course 100A or 200A or Biophysics 260A. 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 basic statistical concepts and statistical inference tools to tackle biological problems. Letter grading.

257. Design, Analysis, and Modeling for Embedded Sensing. (4) Lecture, three hours; discussion, one hour. Recommended 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 such as low-power computing and communications platforms, and robot devices. S/U or letter grading.

C260. Site-Specific Topics. (4) Seminar, three hours. Tracking of invisible flows of data through greater Los Angeles metropolitan area, with focus on small number of specific sites situated prominently in both physical and virtual (data) spaces. Documentation of kinds of data that originate, terminate, or simply route through each location. Consideration of analyses (vi-sualizations, maps) of processes 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 additions 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 C160. S/U or letter grading.

C261. Introduction to Pattern Recognition and Machine Learning. (4) Lecture, three hours. Requisites: course 100B or Mathematics 33A. Recommended: Computer Science 180. Introduction to state-of-art computational models such as Bayesian and graphical models that work in low-, mid-, and high-level vision. Discussion of relevant evidence from anatomy, electrophysiology, imaging (e.g., fMRI), and psychophysics. Concentration on methods and model building of these phenomena, taking into account recent progress in probabilistic models of computer vision and developments in machine learning. S/U or letter grading.

C273. Applied Geostatistics. (4) Lecture, three hours; discussion, one hour. Geostatistics can be applied to many problems in other disciplines such as hydrology, traffic, air and water pollution, epidemiology, economics, geography, water management, forestry, oceanography, meteorology, and agriculture and, in general, to every problem where data are observed at geographic locations. Acquisition of knowledge from diverse disciplines on techniques that can be used to model spatial data problems and to connect geostatistics with geographic information systems (GIS). Concurrently scheduled with course C173. S/U or letter grading.


285. Seminar: Computing for Statistics. (2 to 4) Seminar, one to three hours. Topics in 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 complex data analysis and/or experimental design problems encountered by biology graduate students in their own research. S/U or letter grading.

287. Seminar: Gene Expression and Systems Biology. (2) Seminar, two hours. Designed for graduate students. Statistical solutions to complex data analysis and/or experimental design problems encountered by biology graduate students in their own research. S/U or letter grading.

363 / Statistics
495C. Evaluation of Teaching Assistants. (2) Seminar, two hours. Overview of new trends and directions in teaching of statistics. Observation of teaching assistants twice by instructor to give them chance to observe 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
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Chairs
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Jonathan R. Hiatt, M.D., Vice Chair, Surgical Education
Peter F. Lawrence, M.D. (Wiley F. Barker Endowed Professor of Vascular Surgery), Vice Chair, Clinical Practice and Strategic Planning
Jerzy W. Kupiec-Wegrzynski, M.D., Ph.D., (Joan 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
Matthews G. Stelzner, M.D., Vice Chair, VA Greater Los Angeles Healthcare System
Bruce E. Stabile, M.D., Vice Chair, Harbor-UCLA
Robert S. Bennon, M.D., Interim 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
F. Charles Brincicardi, M.D., Vice Chair for Surgical Services, Santa Monica-UCLA Medical Center

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 Reagon 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
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http://www.tft.ucla.edu/programs/theater-department/

Michael J. Hackett, Ph.D., Chair

Professors
Sue-Ellen Case, Ph.D.
Susan L. Foster, Ph.D.
Hanley L. Geogamah, B.F.A.
Michael J. Hackett, Ph.D.
Patricia M. Harter, Ph.D.
Neil P. Jampolis, B.F.A.
Chrisi Karvondies-Dushenko, M.F.A.
Deborah Nadoolman Landis, Ph.D. (David C. Copley Professor for Study of Costume Design)
Rich S. Rose, M.F.A.
José Luis Valenzuela, B.A.
Edit E. Villareal, M.F.A.

Professors Emeriti
Alan M. Armstrong, M.F.A.
John R. Cauble, M.A.
Robert H. Hethmon, Ph.D.
Anna Krajewska-Wiezorek, Ph.D.
Michael S. McLain, Ph.D.
Joanne T. McMaster, M.F.A.
Mel Shapiro, M.F.A.
Carol J. Sorgenfrei, Ph.D.
William D. Ward, M.F.A.
William T. Wheatley, Ph.D.
Margaret L. Wilbur, M.F.A.

Associate Professors
Joseph M. Olivier, M.F.A.
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/theater-depart/.

Undergraduate Study

The Theater major is a designated capstone major. Theater capstone courses represent the highest level of student scholarship/esthetic 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/theaterba. There is a $70 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). 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 165C) 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 vi-

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.
usal 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 requirements or another minor, and at least 16 units applied toward the minor must be taken in residence at UCLA. Transfer credit for any of the above is subject to department approval.

Each minor course must be taken for a letter grade, 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://grad.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 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 Music 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. (6) Lecture, three hours; discussion, two hours. Exploration of theater in performance as revealed in productions and guest artists of UCLA international Theater Festival, with emphasis on collaborative role of theater artists and active role of audience. Students view selected productions, go back stage to discover how they are realized, and meet creative team. Letter grading.

4. Israel and Palestine in Literature and Media. (5) Lecture, three hours; discussion, two hours. Readings in English. Exploration of Israel and Palestine through artistic, cultural, and political modes of analysis. Examination of selected works of literature, theater, and film dramatic by Israeli, Palestinian, and Western artists, looking beyond facile cultural clichés to deeper insights. Letter grading.

10. Introduction to Theater. (5) Lecture, three hours; discussion, one hour. Exploration of theater in production, with emphasis on collaborative role of the 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 methods of interpretation in theater and performance throughout world. Topics illustrated by faculty members and guest speakers, visits to off-campus theaters, and reading from contemporary plays. Letter grading.

12. Introduction to Performance. (4) Lecture, two hours; studio, four hours. Investigation of phenomenon of performance and role of performer in theatrical events, including interpretation of drama through performance. Examination of various forms of theatrical performance and styles of expression, and development of acting, voice, and movement skills. Letter grading.

13. Play Reading and Analysis. (5) Lecture, three hours. Provides base for subsequent study in theater. 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 study. Letter grading.

15. Introduction to Directing. (4) Lecture, two hours; studio, four hours. Investigation of role of director in theatrical production and theories of play direction, with emphasis on analysis and interpretation of dramatic work and its realization in production. Letter grading.

20. Acting Fundamentals. (4) Studio, four hours. Introduction to interpretation of drama through art of actor. Development of individual insights, skills, and disciplines in presentation of dramatic material to audiences. P/NP or letter grading.


23. Musical Literacy for Singing Actors I. (2) Studio, three to four hours. Introduction to and understanding of music 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 use of rhythm to expand movement potential of actors and relevant use of visual arts and animal studies to character development and to expansion of movement potential. P/NP or letter grading.

27. From Vaudeville to Standup Comedy. (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 among all styles of comedy to find value of improvisation/imagination as well as innovative writing skills in all comic forms, to discover how comedy draws from so many art forms, including music/songs, dance, storytelling, clowning, magic, design, and tumbling/stunts, and to build overall confidence in ease 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.

28D-28E-28F. Acting, Voice, and Movement Workshops II. (2-2-2) Studio, six hours. Study of beginning acting technique, scene study, and development of voice and movement skills. Each course may be repeated for maximum of 12 units. Letter grading.

30. Dramatic Writing. (4) Studio, three hours. Exploration and development of creative writing skills for one or more of various forms of entertainment media. May be repeated once.


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.
Upper Division Courses

101A. Making Tradition. (5) Lecture; four hours; discussion, one hour. Examination of traditional performance traditions in terms of how they were produced, including technical training, archive practices, and forms of history. Examples may include classical Greek tragedy, Noh and Kyogen, Zaijia and Chuanqi, Quem Queritis/English medieval festival plays, Sanskrit drama, Yoruba and Egungun, Yaku deer dance, depending on faculty and resources available. Letter grading.

101B. Reconstructing Theatrical Past. (5) Lecture; three hours; discussion, one hour. Reconstructing theater is the attempt to reconstruct performance spaces or specific productions and traditions such as neoclassicism that seek to restate classical traditions. Letter grading.

101C. Deconstructing Theater. (5) Lecture; three hours; discussion, one hour. Exploration of deconstructive practices such as fragmentation, abstraction, and absurdist, with focus on theatrical movements, directorial adaptations, cultural translations, and absurdism, with focus on theatrical movements. Letter grading.

102A. Theater of Japan. (5) Lecture; three hours. Exploration of major theater traditions of Japan from emergency right after World War II to contemporary activity to present, including investigation of Noh, Bunraku, and Kabuki performance traditions. Letter grading.

102B. Theater of Southeast Asia. (5) Lecture; three hours. Examination of representative theatrical genres 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, which focuses 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. (4) (Same as Afro-American Studies M103A.) Lecture, three hours. Designed for juniors/seniors. Examination of the evolution of African American theater with special focus on the emergence of musical theater as social institution in America from slavery to abolition in the 19th century. Letter grading.

103B. African American Theater History: Minstrel Stage to Rise of American Musical. (4) (Same as Afro-American Studies M103B.) Lecture, three hours. Focus on minstrel stage to rise of American musical theater as Afro-American Studies M103B.) Lecture, three hours. Analysis and discussion of historical and political events from 1850 to 1980, as well as theatrical traditions that led to emergence of Chicano theater. Letter grading.

103C. Origins and Evolution of Chicano Theater. (5) (Same as Chicana and Chicano Studies M103C.) Lecture, three hours. Designed for juniors/seniors. Exploration of development of Chicano theater from its beginning in legends and rituals of ancient Mexico to work of Luis Valdez (late 1960s). P/NP or letter grading.


103I. Israel and Palestine: Communities, Conflicts, Cultures, and Arts in Middle East. (4) Lecture; three hours. No background on or prior interest in history or region is required. In establish, as primarily known by names of Zion, Holy Land, Palestine, and Israel is not just one place. It is a realm of illusion, envisioned and reinforced throughout history. It is at once real and surreal, studly and fragile, all-enduring and ephemeral. Examination of selected works of literature, performance, visual arts, film, and media by Israeli and Palestinian artists, as well as Western artists with interest in region. Looking beyond boundaries and facile cultural cliches for deeper insights can offer into cultural conflict and community at large, to emerge with surprising conclusions. Letter grading.


108. Undergraduate Seminar: History and Criticism. (5) Seminar, four hours. Limited to 15 students. Selected topics in history and criticism of theater and performance. Study of how experimental theaters originate, how they maintain their form of performance, their audience, and their goals. Concentration on theaters that regarded themselves, in some way, as experimental. Examples primarily from theaters within U.S. from 1960s to present, although examples from other countries, specifically Poland, also considered. Letter grading.

109. Art and Performance: Interdisciplinary Approach to Collections of Getty Center. (5) (Same as Honors College M109A.) Lecture and 12 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.


111A-111B-111C. Selected Topics in European Theater. (5-5-5) Lecture, three hours. Investigation in depth of selected areas of study and traditions of European performance to be arranged by historical period, nation of tradition, genre, or other categories. Each course may be repeated twice for credit. P/NP or letter grading.

111C. Interpreting Performance: Examination of Social, Historical, and Cultural Models for Performing Arts. (5) (Same as Honors Collegium M111C.) Lecture, two hours; discussion, two hours. Examination of performance of nature in performance theory and practices, and of social, historical, and cultural contexts in which performance traditions have evolved. Attendance at approximately five designated performances/events required. P/NP or letter grading.

113. Special Topics in Critical Studies. (5) Lecture; three or four hours. Consult Schedule of Classes for author, period, genre, or subject to be studied in specific term. May be repeated for credit. P/NP or letter grading.


115A-115C. Acting II. (4-4-4) Studio, six hours. Development of acting skills through scene study, study of self, and personalization. Examination of characterization exercises and the application to contemporary American scenes. Letter grading.

118A. Creative Dramatics. (4) Lecture/laboratory, four hours. Studies of principles and procedures of improvisational approach to drama as done with children from nursery school to junior high. P/NP or letter grading.

118B. Advanced Creative Dramatics. (2 to 4) Lecture, four hours; other, to be arranged. Practical application of creative drama process. Exploration of interrelationships of arts to traditional disciplines of learning. May be repeated once for credit. P/NP or letter grading.

118C. Interactive Theater. (4) Laboratory, four hours. Active, problem-solving exercises and games designed to examine racial stereotypes, sexual harassment, gender discrimination, and other issues that divide members of campus community, as well as issues that divide campus from Los Angeles community. Selected to increase social and political awareness of problems and ideas fundamental to intellectual development, exercises and games nurture skills and attitudes useful in facilitating discussions between actors and audience participants. Use of techniques of sensory awareness, movement, pantomime, improvisation, and characterization. Letter grading.

118D. ArtsBridge Teaching Practicum. (4) Lecture, four hours. Requisites: courses 118A, 118B. Development of K-12 teaching materials to integrate theater with specific core curricula. Collaboration with classroom teacher to identify core subject to be taught. Language arts, science, history, mathematics, and social sciences are possible curricular areas. Development of evaluation tools to measure effectiveness of integrating theater and curriculum. Weekly meetings to discuss teaching strategies and prepare written lesson plans that incorporate California Teaching Content Standards, objectives, motivation, defined implementation plan, and ideas for assessment. Classroom work culminates in thoroughly documented final project evaluated by ArtsBridge student, classroom teacher, and UCLA faculty members. P/NP or letter grading.

119B. Theater for Child Audience: Performance. (4) Lecture, two hours; studio, four hours. Preparation: audition prior to first class meeting. Designed to provide students to work as ensemble, creating through improvisation theater presentation for young audience. Emphasis on testing theoretical concepts through ensemble work, rehearsal, and presentation of original production for possible presentation outside classroom. P/N or letter grading.

120A-120B-120C. Acting and Performance in Film. (5-5-5) Lecture, six hours. Exploration of acting and performance in film through screening of performance-driven films, class discussion, and acting exercises, examination of methods, styles, and performances of some of the world's most highly regarded actors and their work. Letter grading.

121. Acting Workshop, (2) Studio, to be arranged. Requisite: course 20. Courses 160, 163A, 163B, and 163C may be taken concurrently. Workshop that provides students with opportunity to rehearse, perform, and critique scenes. May be repeated once for credit. P/N or letter grading.

122. Makeup for Stage. (2) Studio, two hours. Art of makeup and its relation to production as whole. History, aesthetics, methods, and procedures of make-up, P/N or letter grading.


124A-124B-124C. Voice and Speech II. (1-1-1) Studio, three to four hours. Development of voice and speech techniques for stage. Letter grading.


125A-125B-125C. Movement and Combat II. (1-1-1) Studio, three to four hours. Physical awareness for actors, 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 actors, concentrating on warming up body, relaxation, control, stunts, gymnastics, martial arts, and use of weapons. Letter grading.

126A-126B-126C. Acting II. (4-4-4) Studio, six hours. Study of characterization, including introduction to Shakespeare. Focus on verse, scan, use of rhetorical devices, and use of emblems in classic texts. Personalization within heightened reality. 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 development of voice and movement skills. Each course may be repeated for maximum of 12 units. Letter grading.

129. Contemporary Topics in Theater, Film, and Television. (2) Same as Film and Television CM129. Lecture, two hours; screenings, two hours. Limited to juniors and seniors; 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 writers and filmmakers through examination of distinctiveness and interrelations among these arts. Individual units include participation of leading members of theater, film, and television professions. May be repeated with adequate changes and new projects. Concurrently scheduled with course CM229. P/N 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 creation and critique 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 student further insights into critical and creating aspects of short and full-length plays and guidance in completion of one-act and full-length plays. May be repeated twice for credit. P/N or letter grading.

130C. Writing for American Musical Theater. Lecture/laboratory, three hours. Study of practice and techniques used in writing libretto for musical theater: opening numbers, romance, subplots, and comedy. May be repeated once for credit. P/N or letter grading.

131A-131B-131C. Intermediate Playwriting. (5-5-5) Lecture, three hours. Letter grading. 131A. Play Strategy. Prequisite: course 30 or 130A. Exploration of play forms and writing of one-act play. 131B. One-Act Play. Requisite: course 131A. Preparation and writing of one-act play and/or outlining of full-length plays. May be repeated twice for credit with consent 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.


133A-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.


134D-134E-134F. Dance for Musical Theater III. (1-1-1) Studio, four to five hours. Development of dance and movement techniques for musical theater. 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. Consecutive 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. (4-4-4) Studio, six hours. Requisite: course 123. Technique of characterization and performance in advanced and complex acting styles. Each course may be repeated once for credit. P/N 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/N or letter grading.

139. Play Reading and Analysis. (5) Lecture, three hours. Investigation of dramatic texts, with focus on production and performance and various other elements essential to effective theatrical interpretation and realization. Letter grading.


140B. Advanced Programming for Entrepreneurial Design. (4) Studio, three hours. Study and practice in object-based programming using MAX/MSP programming language to control sound and video. May be repeated once for credit. Concurrently scheduled with course C440B. Letter grading.

140C. Advanced Projects in Programming for Entrepreneurial Design. (4) Studio, three hours. Advanced projects using object-based programming to control sound and video. May be repeated once for credit. Concurrently scheduled with course C440C. Letter grading.

144A-C144B-C144C. Advanced Sound Design. (4-4-4) Lecture, four hours; laboratory, four hours. Concurrently scheduled with courses C444A-C444B-C444C. Letter grading.

144A. (4) Lecture, four hours; laboratory, four hours. Study of sound and acoustics as they relate to performance environments, techniques associated with recording, mixing, processing, and reproduction of dialogue, effects, and music tracks for theatrical sound design. May be repeated once for credit. Letter grading.

144B. (4) Lecture, four hours; laboratory, four hours. Advanced study and practice in preparation and recording of theater sound designs, with emphasis on analysis of script and score, conceptual development of design, and multitrack recording techniques to realize design. May be repeated once for credit. Letter grading.

144C. (4) Lecture, four hours; laboratory, four hours. Study and practice in processing and mixing of live and recorded sound; mix-down of multitrack recordings; preparation of sound tracks and sound reinforcement in theater. Study of 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. Design of costumes for theatrical presentations. Study of use of silhouette, fabrics, color, and decoration as related to theatrical characterizations. May be repeated once for credit. P/N or letter grading.

146A-C146B-C146C. Art and Process of Entrepreneurial 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 C446A-C446B-C446C. Letter grading.

146A. (4) Lecture, three hours. Exploration of original forms of media-rich entertainment experience through lectures, presentations, and seminar participation. Students form collaborative teams to conceive and propose interactive entertainment events. May be repeated once for credit. Letter grading.

146B. (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.

146C. (4 to 8) Lecture, three to six hours. Prototype development; conceptual refinement and technological realization of prototypes, that may entail creation of elaborate proposals containing storyboards, budgets, and models or may involve production of short performances demonstrating entertainment potential of concepts or prototypes. May be repeated once for credit. Letter grading.
147A. Drafting. (4) Studio, four hours. Development of visual communication skills through drafting. Exploration of design procedures. May be repeated once for credit. Letter grading.

147B. Drawing Scenery. (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 Theatre. (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 impetus for design, text analysis, metaphor, and conceptualization. Investigation of design research process, composition, and style leading to visual presentation of design. May be repeated once for credit. Concurrently scheduled with course C451A. Letter grading.

C151B. Scenic Design for Theater. (4) Lecture/studio, four hours. Requisites: courses 14A, 14B, 14C. 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 C452A. 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. Imaginative and practical design process, color 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 C453A. Letter grading.

C154A. Sound Design. (4) Lecture/studio, four hours. Requisites: courses 14A, 14B, 14C. Introduction to sound and audio in acoustic, audio, and digital 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. 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 C454B. Letter grading.

C154C. 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 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-perspective point, form, light, shade, and textures. Letter grading.

C155B. Watercolor Rendering. (2) Studio, four hours. Requisite: course 147A or 147B. Study of watercolor techniques for representation of scenic designs, 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. Requisites: courses 14A, 14B, 14C. Model making and model for representation of scenic designs from initial working prototypes to finished color models. Use of wide variety of materials and techniques for execution of model. Letter grading.

C155E. Life Drawing. (2) Studio, four hours. Requisite: course 147A or 147B. Study and practice in drawing of human form. Letter grading.

C155F. Costume Rendering. (2) Studio, four hours. Requisite: course 147A or 147B. Study of 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 subject-technique combinations to enhance traditional methods for design for theater. May be repeated once for credit. Letter grading.


C157A-C157B-C157C. Costume Construction Techniques. (2-2-2) Studio, four hours. Study of theory and application of drafting, pattern making, fitting, and construction techniques for period costumes and underwear 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.


Problems of unions, auditions, organization, scheduling, and responsibilities of lengthy run. May be repeated three times for credit. Letter grading.
175A-175C-175D. Summer Theater Workshops. (4 or 8 each) Laboratory, 12 to 24 hours. Participation in workshops 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 selected topics in theater production and performance. Offered in summer only. Letter grading.
178. Film and Television Acting Workshop. (2) Same as Film and Television M177.) Laboratory, four hours. Workshop providing opportunities for students to rehearse, perform, and evaluate scenes. Three different production styles to which performers may need to adjust are (1) preproduction rehearsals with director, (2) single-camera experience, and (3) multiple-camera experience. May be repeated twice for credit. Letter grading.
180. Senior Project. (4) Lecture, studio, three hours. Requisites: courses 101A, 101B, 101C. Preparation of conceptual or creative project to provide culminating experience in creative or research work. May be repeated twice for credit. Letter grading.
181. Career Development for Actors. (2) Lecture, three hours; fieldwork, three hours. Limited to seniors. Study of business practices, career entry, and development for actors. P/NP or letter grading.
181A. 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. Currently scheduled with course C285B. P/NP or letter grading.
181B. 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 Imagination in Museums. (4) (Same as Honors College M116.) Three hours. Offered in collaboration with Los Angeles County Museum of Art (LACMA). Interpretation of art in collection through taking, dialogues, movement, and music. Research into history and art history and production of creative performance piece required. P/NP or letter grading.
195. Community or Corporate Internships in Theater, Film, and Television. (2, 4, or 8) Tutorial, eight, 16, or 24 hours. Limited to juniors/seniors. Internship at various theaters, studios, or entertainment organizations accentuating creative contributions, organization, and work of professionals in various specialties. Students meet on regular basis with instructor and provide periodic reports of their experience. May be taken for maximum of 8 units. Individual contract required. P/NP or letter grading.
199. Directed Research or Senior Project in Theater. (2 to 8) Three to 24 hours. Limited to juniors or seniors. Supervised individual research or investigation under guidance of faculty mentor. Cumulating paper or project required. May be repeated for credit. Individual contract required. P/NP or letter grading.

Graduate Courses
202A. Seminar: Western Classical 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.
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 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 theatrical architecture, theatrical production, and dramatic form in English and Continental theater. 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 relevance to politics 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 symbolic,, 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 theater forms of South Asia, 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 studies that explores significant issues and 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. Investigation of history and literature of theater as manifest in one or more of its major forms or genres. May be repeated four times for credit. S/U or letter grading.
205A-205B-205C. Background of Theatrical Art. (5-5-5) Seminar, three hours. Designed for graduate students. Analysis of major plays, commedia, and historical materials. S/U or letter grading. 205A-
265. 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. Historic survey and indepth exploration of selected periods, with study of influences of diverse cultures. Letter grading.

266. 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. Historic survey and indepth exploration of selected periods, with study of influences of diverse cultures. Letter grading.

267. 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. Historic survey and indepth exploration of selected periods, with study of influences of diverse cultures. Letter grading.

268. 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. Historic survey and indepth exploration of selected periods, with study of influences of diverse cultures. Letter grading.

269. 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. Historic survey and indepth exploration of selected periods, with study of influences of diverse cultures. Letter grading.

270. 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. Historic survey and indepth exploration of selected periods, with study of influences of diverse cultures. Letter grading.

271. 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. Historic survey and indepth exploration of selected periods, with study of influences of diverse cultures. Letter grading.

272. 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. Historic survey and indepth exploration of selected periods, with study of influences of diverse cultures. Letter grading.

273. 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. Historic survey and indepth exploration of selected periods, with study of influences of diverse cultures. Letter grading.

274. 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. Historic survey and indepth exploration of selected periods, with study of influences of diverse cultures. Letter grading.

275. 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. Historic survey and indepth exploration of selected periods, with study of influences of diverse cultures. Letter grading.

276. 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. Historic survey and indepth exploration of selected periods, with study of influences of diverse cultures. Letter grading.

277. 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. Historic survey and indepth exploration of selected periods, with study of influences of diverse cultures. Letter grading.

278. 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. Historic survey and indepth exploration of selected periods, with study of influences of diverse cultures. Letter grading.

279. 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. Historic survey and indepth exploration of selected periods, with study of influences of diverse cultures. Letter grading.

280. 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. Historic survey and indepth exploration of selected periods, with study of influences of diverse cultures. Letter grading.

281. 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. Historic survey and indepth exploration of selected periods, with study of influences of diverse cultures. Letter grading.

282. 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. Historic survey and indepth exploration of selected periods, with study of influences of diverse cultures. Letter grading.

283. 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. Historic survey and indepth exploration of selected periods, with study of influences of diverse cultures. Letter grading.

284. 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. Historic survey and indepth exploration of selected periods, with study of influences of diverse cultures. Letter grading.

285. 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. Historic survey and indepth exploration of selected periods, with study of influences of diverse cultures. Letter grading.

286. 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. Historic survey and indepth exploration of selected periods, with study of influences of diverse cultures. Letter grading.
298A-298B. Special Studies in Theater Arts. (2 or 4 each) Lecture/discussion, two or four hours. Design for performance or study of conceptual and literary problems in theater arts, organized on topic basis. Each course may be repeated once for credit. S/U or letter grading.

375. Teaching Apprentice Practicum. (1 to 4) Seminar, to be arranged. Preparation: apprentice personnel employment as teaching assistant, associate, or fellow. Teaching apprenticeship under active guidance and supervision of regular faculty member responsible for student teaching and instruction at UCLA. May be repeated for credit. S/U grading.

420A-420B-420C. Advanced Acting I. (4 to 5-4) Studio, six to 18 hours. Letter grading:

420A. (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 circumstancs, life of character, and intentions of scene. Letter grading.

420B. (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. Letter grading.

420C. (4) Studio, six to 18 hours. Development of external technique through comedy and of skits, improvisation, physical humor, delivery of lines, rhythm, timing, and public cabinet. Fusion of internal: use of action and objective with external. Letter grading.

421A-421B-421C. Advanced Acting II. (4 or 4 each) Studio/laboratory, six to 18 hours. Letter grading.


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 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 speaking voice. Speech training uses International Phonetic Alphabet to train students in stage, film, and television work. 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. Articulation and phonetic alphabet. Text work in classical verse. Letter grading.

425A-425B-425C. Advanced Movement I. (2 or 4 each) Studio/laboratory, three to six hours. Development of body's unique language through exercises designed to explore and find 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 implications for performance: music, dance. Advancement of physical training of individual actors to their maximum potential. Experience in techniques and discovery of origins of variety of acrobatic and dance disciplines; creation of ballet, balloon, 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 disciplines: capoeira, martial arts, ballet, balloon, 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 balance, poise, and coordination of body and mind. Exploration of use of rhythm to expand movement potential of actors and relevant use of visual arts and animal studies to character development and to expansion of movement potential. Letter grading.

429. Performance Workshop. (2) Studio, four hours. Limited to graduate students not enrolled in M.F.A. acting program. Study and practice of performance techniques, including autodrama and scene study. Development of performance skills through scene study, use of self, and personalization. Examination of character exercises and their application to scenes. 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 stage to 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, emphasis on communication, artistic growth, and professional process. Each course may be taken for maximum of 8 units. Concurrently scheduled with courses C133A, C133B, C133C. Letter grading.


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 C140C. Letter grading.

441A-441B-441C. Lighting Design. (4-4-4) Lecture/ studio, four hours. Letter grading:

441A. (4) Lecture/studio, four hours. Study and practice in lighting actors, emphasizing textual and character analysis from lighting designer's perspective, conceptual development with director, effect of light on dynamics of staging and relation of lighting designer to actor. May be repeated once for credit. Letter grading.

441B. (4) Lecture/studio, four hours. Study of use of light and color to define space, effect of light on scen- ery and costumes, lighting for arena/thrust theaters, multiscreen productions, lighting patterns, and moving scenery. May be repeated once for credit. Letter grading.

441C. (4) Lecture/studio, four hours. Investigation of lighting design in production, musical theater, opera, touring, and repertory situations. Study of analysis of script and score for lighting designer. May be repeated once for credit. Letter grading.

441D. Scenic Projection and Media Techniques. (4) Lecture/laboratory, four hours. Designed for graduate students. Advanced study and practice in scenic projection and media techniques, with emphasis on analysis design, and production of theatrical projection and photographic technique for stage. S/U or letter grading.

442A-442B-442C. Costume Design. (4-4-4) Lecture/studio, four hours. Advanced study and practice in costume design for theater. Imagination as impetus for design, text analysis, metaphor, and conceptualization. Investigation of design research process, period, style, and character analysis leading to visual presentation of design. Study and development of theatrical productions, ballet, opera, and musical theater. Each course may be repeated once for credit. Letter grading.

443. 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.

444A-444B-444C. 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 perfor- mance environments, techniques associated with re- cording, mixing, processing, automation, and repro- duction of dialogue, effects, and music tracks for the- ater sound design. May be repeated once for credit. Letter grading.

C444B. (4) Lecture, four hours; laboratory, four hours. Advanced study and practice in preparation and re- cording of theater sound designs, with emphasis on analysis of script and score, conceptual development of design, and multitrack recording techniques to re- alize design. May be repeated once for credit. Letter grading.

C444C. (4) Lecture, four hours; laboratory, four hours. Study and practice in processing and mixing of live and recorded sound; mix-down of multitrack record- ings; preparation of sound tracks and sound reinforce- ment in theater. Study of creation of sound ef- fects, control of MIDI data, and design techniques for music theater. May be repeated once for credit. Letter grading.

445A-445B-445C. Production Design for Film, Television, and Entertainment Media. (4-4-4) Lecture/studio, four hours. Study and practice in design of scenic environ- ment for film, video, and entertainment media, includ- ing effect of differing media on design choices, role of production designer and director in design, and design for single- and multi-camera production. Each course may be repeated once for credit. Letter grading.
C446A-C446B-C446C. Art and Process of Entertainment Design. (4-4 to 4) 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 design and 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 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.

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 models or may involve production of short performances demonstrating entertainment potential of concepts or prototypes. May be repeated once for credit. Letter grading.

448A-448B. Costume Design for Film, Television, and Entertainment Media. (4-4) Lecture/studio, four hours. Study and practice in design of costumes for live and visual performances for television in film, television, and entertainment media, including effect of differing media on design choices. Each course may be repeated once for credit. Letter grading.

449. Design Thesis Project. (4) Lecture/studio, four hours. Series of group design projects that serve 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. Imagination as impetus for design, text analysis, metaphor, and conceptualization. Investigation of design research process, composition, and style leading to visual presentation of design. May be repeated once for credit. Concurrently scheduled with course C153A. Letter grading.

C453B. Costume Design for Theater. (4) Lecture/ studio, four hours. Study of costume design for proscenium, thrust, and arena configurations, 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 domain. 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. Use of 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 one- and two-point perspective, form light, shade, and textures. Graduate students expected to produce drawings demonstrating higher level of proficiency and skill. Letter grading.

C455B. 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. 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 communnication 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. Study of basic techniques for painting and rendering color design and elevations. May be repeated once for credit. Letter grading.

C455H. Selected Topics in Graphic Representation of Design. (2) Studio, six hours. Group study of selected subjects or techniques for interpretation of design for theater. May be repeated once for credit. Letter grading.


C456D. Introduction to Computer-Assisted Drafting. (4) Studio, four hours. Concurrently scheduled with course C147A. 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 costume using contemporary methods. Each course may be repeated once for credit. Concurrently scheduled with courses C157A-C157B-C157C. SU/Letter grading.

C457A. Draping, patterning, and cutting techniques for period costumes and undergarments. Concurrently scheduled with course C157A-C157B-C157C. SU or Letter grading.


URBAN PLANNING

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Dana Cuff, Ph.D.
Susanna B. Hecht, Ph.D.
Richard J. Jackson, M.D.
Jacqueline Leavitt, Ph.D.
Anastasia Loukaitou-Sideris, Ph.D.
Paul M. Ong, Ph.D.
Donald G. Shoup, Ph.D.
Michael A. Stoll, Ph.D.
Michael C. Storper, Ph.D.
James E. Lubben, D.S.W.
Abel Valenzuela, Jr., Ph.D.

Cooperative Program. (2 to 8)

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

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, M160, M165, M175, C184 and (b) up to two courses from Anthropology 167, Chicana and Chicano Studies 181, Geography 150, History 145A, 145B, Management 157, 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 — individual research project.

A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor.

Each minor course must be taken for a letter grade, and students must have an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website, http://grad.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


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, urban transportation, and residential location and segregation. P/NP or letter grading.

121. Urban Policy and Planning. (4) Lecture, three hours. Examination of current urban planning and policy issues and debate, introduction to and analysis of the market, structure, investment, and development in urban areas, and public policies and planning. P/NP or letter grading.

122. Policy, Planning, and Community. (4) Same as Asian American Studies M108.) Lecture, three hours; field laboratory. Project-oriented methods course on conducting needs assessment in Asian American communities. Geographic information systems to be used to define problems and needs. Letter grading.

123. Special Topics in Urban Policy and Research. (4) Lecture, three hours. Examination of particular planning/policy subfield (e.g., economic development, 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. populations are urbanized, areas, and world population is becoming more urbanized with each passing decade. National, state, and local governments are engaged in managing, planning, policy-making, and governance in urban context. Ultimate efficacy of those policies should 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 transport. P/NP or letter grading.

133. Political Economy of Urbanization. (4) Lecture, three hours. Introduction to new approaches to urban studies, basic concepts and analytical approaches to 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, urbanization and metropolitan political fragmentation, urban fiscal crises, and role of urban social movements. Concurrently scheduled with course C237C. Letter grading.

137. California Sustainable Development: Economic Perspective. (4) Same as Environment M135 and Public Policy M149.) Lecture, three hours. Examination of specific environmental challenges that California faces. Microeconomic perspective used, with special emphasis on incentives of polluters to reduce 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.

138. M150. Transportation Geography. (4) Same as Geography M143.) Lecture, three hours. Designed for juniors/seniors. Study of geographical aspects of transportation, with focus on characteristics and functions of various modes and on complexities of intra-urban transportation. P/NP or letter grading.
M171. Planning Issues in Latino/Latina Communities. (4) (Same as Chicana and Chicano Studies M122.) Lecture, four 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.

M175. Women and Cities. (4) (Same as Gender Studies M175.) Lecture, three hours. Limited to junior/senior majors. Examination of relationship between women and cities: (1) how cities have affected women's opportunities for economic and social equality, (2) women's contributions to development of U.S. cities, and (3) contemporary strategies and efforts to create urban environments that reflect women's needs and interests. P/NP or letter grading.

C184. Looking at Los Angeles. (4) Lecture, three hours. 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 subjects of special interest to student. Limited to junior/senior minor students. Described 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 agencies and Community Learning and must complete minimum of 30 hours of work. Duties and responsibilities to be set by students and sponsoring organizations. Hours to be determined in consultation with instructor. P/NP grading.


195. Community Internships in Urban Planning. (4) Tutorial, three hours. Limited to junior/senior. Supervised individual research or investigation under guidance of faculty mentor. 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. Reading of 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 M202A and Law M202B.) Lecture, three hours each. Consideration of selected aspects of housing law and policy, including current federal and state housing subsidies; remedies of housing consumers; impacts of market discrimination against children, racial minorities, and women; and environmental laws influencing cost and supply, such as antispread and rent control legislation. Catalytic role of economic and community development in expansion of housing supply also considered. Letter grading.

M203A-203B. Seminar: Housing Segregation, Housing Discrimination, and Evolution of Public Policy. (1 to 8 each) (Same as Law M203A and Law M203B.) Seminar, three hours each. Course M203A is enforced requisite to 203B. Consideration of selected aspects of housing law and policy, including current federal and state housing subsidies; remedies of housing consumers; impacts of market discrimination against children, racial minorities, and women; and local governmental laws influencing cost and supply, such as antispread and rent control legislation. Catalytic role of economic and community development in expansion of housing supply also considered. Prerequisite: M203A and letter (203B) grading.

M204. Research Design and Methods for Social Policy. (4) (Same as Public Policy M218.) Lecture, three 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 for second half, various data collection methods, including ethnography, interviewing, and survey design. Letter grading.

M205A-205B. M.U.R.P. Comprehensive Examination: Applied Planning Research Project I, II. (4-4) (Formerly numbered 205.) Seminar, three hours. Required of all second-year students completing applied planning research project. M.U.R.P. comprehensive examination administered at end of project. Students are matched, through departmental selection process, with professors to work on project. Degree committees to determine primary professor. Letter grading.

M206A. Introduction to Geographic Information Systems. (4) (Same as Public Policy M224A and Public Policy M224B.) Seminar, three hours; laboratory, two hours. Experience with GIS and statistical software useful but not necessary. Topics include geographic information systems, data manipulation, spatial analysis, information systems, and database management and analysis. Letter grading.

M206B. Advanced Geographic Information Systems. (4) (Same as Public Policy M224B.) Studio, three hours. Prerequisite: course M206A or Public Policy M224A. Knowledge and skill development necessary to plan design and publish Web-based geographic information systems (GIS) solution. Coverage of basics of Internet programming languages, including JavaScript, jQuery, CSS, and HTML. Exploration of different Web-authoring tools, including WordPress as content management platform, Google Maps API, and ArcGIS Server. Students work in pairs to develop identical projects. Letter grading.

M207. Applied Microeconomics for Urban Planning. (4) Lecture, three hours. Preparation: passing score on OMEDA examination as well as one day of class. Prerequisite: core microeconomics and intermediate macroeconomics. Practical use of economics in analyzing public resource allocation problems. Topics include review of marginal analysis, difference between equity and efficiency, public goods and free rider problem, environmental pricing, public service pricing, and conflicts between individual and collective rationality. Letter grading.

M208A. Colloquium in Planning Research. (4) Lecture, one hour; discussion, two hours. Required of first-year Ph.D. students. Introduction to design and execution of planning research; exploration of subfields of planning scholarship and approaches to research on contemporary planning topics. Preparation and filing of Ph.D. program of study. Letter grading.

M208B. Introduction to Research Design. (4) Seminar, three hours. Required in first or second year of Ph.D. program. Identification of planning problems, formulation of research questions, review of literature and identification of gaps, development of researchable hypotheses, understanding of strengths and weaknesses of quantitative and qualitative methodologies, understanding of threats to validity, review of critiques of traditional methods and of alternative approaches to scholarship. Letter grading.

M208C. Advanced Research Design. (4) Seminar, three hours. Required of all Ph.D. students who have passed their field examinations but have not yet advanced to candidacy, and all M.U.R.P. students completing their thesis capstone option. Advanced research design course in selecting problem/question to study, reviewing previous research on problem/question, framing specific researchable hypotheses for selecting methodology and plan for testing hypothesis. Students complete and orally defend their dissertation/thesis proposal. May be repeated for credit. S/U or letter grading.

M209. 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, directed primarily toward those interested in intersection of law and policy: broad array of urban issues examined, as is law's role as partial cause 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; laboratory, five to 10 days. Topics of planning and policy in various international or domestic sites. Topics may include urban development, land use, environmental issues, transportation, infrastructure planning, housing development, community development, and/or physical planning. May be repeated for credit. S/U or letter grading.

214. Neighborhood Analysis. (4) Lecture, two hours; laboratory, two hours. Experience with GIS and statistical software useful but not necessary. Methods-oriented studio course, with focus on developing data and analytical skills required to profile and analyze neighborhoods. Working in teams students develop quantitative neighborhood profiles that can used in community planning and at other geographical levels (e.g., cities, counties, and regions). Students gain professional experience and produce product that benefits larger community. Data management and analysis, including accessing, cleaning, and presenting data. Letter grading.

M215. Spatial Statistics. (4) (Same as Geography M272 and Statistics M222.) Lecture, three hours. Designed for graduate students. Survey of modern methods used in analysis of spatial data. Implementation of various techniques, three hours. Topics may include use of diverse fields, including neuroimaging, geography, seismology, demography, and environmental sciences. S/U or letter grading.

217A-217B. Comprehensive Planning Project. (4-4) Seminar, three hours. Designed for second-year students. Comprehensive project brings together students of varying backgrounds and interests in joint solution of urban planning problems. Each project requires...
229. Special Topics 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.

220A. Quantitative Analysis in Urban Planning I. (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 class. Introduction to concepts of statistical inference and modeling, with emphasis on urban planning applications. Topics include sampling, hypothesis testing, analysis of variance, correlation, and simple and multiple regression. Use of computer as tool in statistical analysis and modeling. Letter grading.

220A. 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 class. Introduction to concepts of statistical inference and modeling, with emphasis on urban planning applications. Topics include sampling, hypothesis testing, analysis of variance, correlation, and simple and multiple regression. Use of computer as tool in statistical analysis and modeling. Letter grading.

222A. Advanced Planning Theory and History I, II. (4-4) Lecture, three hours. Required of first-year M.A. students, two hours. Recommended for third-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 multiple and pluralistic publics. Letter grading.

222C. Special Topics in Planning Methods. (2) Seminar, three hours. Topics in urban and regional planning selected by faculty members. May be repeated for credit. S/U or letter grading.

223. Disaster Management and Response. (4) Lecture, three hours. Through readings and presentations, examination of disaster management and response in both U.S. and developing countries. Exploration of how disaster impacts and risk reduction both relate to economic, vulnerability, and political factors, in addition to acts of nature. Structured to allow students to focus on different disasters and themes as set out in reading and weekly sessions. Letter grading.

223.1. Regional Economic Development. (4) Lecture, three hours. Examination of how disasters differ across regions and the impacts of these differences on communities. Letter grading.

223A. Development Theory. (4) Formerly numbered 234A.) (Same as Geography M234A.) Lecture, three hours. Examination of models of development, with particular emphasis on the role of political factors. Letter grading.

223B. Special Topics in Regional and International Development. (4) Lecture, three hours. Examination of how disasters differ across regions and the impacts of these differences on communities. Letter grading.

223C. Political Economy of Urbanization. (4) Lecture, three hours. Examination of theoretical approaches to urban studies, basic concepts and analytical approaches of urban political economy, with major emphasis on European urban problems and restructuring of modern metropolises and geographies of urbanization, development and transformation of urban spatial structure, urbanization and metropolitan political fragmentation, urban fiscal crises, and role of urban social movements. Concurrently scheduled with course C133. S/U or letter grading.

224A. Development Theory. (4) Formerly numbered 234A.) (Same as Geography M234A.) Lecture, three hours. Examination of models of development, with particular emphasis on the role of political factors. Letter grading.

225. Visual Communication Skills. (2) Five-week course. Lecture, two hours; laboratory, one hour. Greater emphasis on graphic presentation and visual communication to educate stakeholders, advocate for change, and provide a bigger picture of planning process in recent years, in both public and private sector. Visual communication requires analytic skills and strategic thinking, strong foundation in design theory, and technical skills in computer programs. Introduction to Adobe InDesign and Illustrator and foundation in design theory and communication. How to use graphic design and presentation programs (i.e., Adobe InDesign, Adobe Illustrator, GIS, PowerPoint) to create attractive and powerful planning materials and reports, design principles to communicate ideas in clear, succinct, and engaging manner, and how to use graphic materials to support verbal presentations or written reports. Letter grading.

229. Special Topics in Planning Methods. (4) Lecture, three hours. Topics in planning methodology selected by faculty members. May be repeated for credit. S/U or letter grading.

M230. Introduction to Regional Planning. (4) Same as Public Policy M241.) Lecture, three hours. Critical and historical survey of evolution of regional planning theory and practice, with particular emphasis on relations between regional planning and developments within Western social and political philosophy. Major concepts include regions and regionalism, territorial community, and social production of space. Letter grading.

232. Disaster Management and Response. (4) Lecture, three hours. Through readings and presentations, examination of disaster management and response in both U.S. and developing countries. Exploration of how disaster impacts and risk reduction both relate to economic, vulnerability, and political factors, in addition to acts of nature. Structured to allow students to focus on different disasters and themes as set out in reading and weekly sessions. Letter grading.

233. Political Economy of Urbanization. (4) Lecture, three hours. Exploration of theoretical approaches to urban studies, basic concepts and analytical approaches of urban political economy, with major emphasis on European urban problems and restructuring of modern metropolises and geographies of urbanization, development and transformation of urban spatial structure, urbanization and metropolitan political fragmentation, urban fiscal crises, and role of urban social movements. Concurrently scheduled with course C133. S/U or letter grading.

234A. Development Theory. (4) Formerly numbered 234A.) (Same as Geography M234A.) Lecture, three hours. Examination of models of development, with particular emphasis on the role of political factors. Letter grading.

236. Advanced Workshop in Regions in World Economy. (4) Lecture, three hours. Examination of nature and effects of globalization on development, employment, and social structure, along with implications for policy. Letter grading.

236C. Advanced Workshop in Regions in World Economy. (4) Lecture, three hours. Examination of nature and effects of globalization on development, employment, and social structure, along with implications for policy. 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 sectors 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. Because economic development strategies seek 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.

C237. 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 conflict 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. Examination of how disasters differ across regions and the impacts of these differences on communities. Concurrently scheduled with course M230. Letter grading.

240. Local Government. (2 to 6) (Same as Law M285.) Lecture, three hours. Analysis of structure and function of local, regional, and state government in historical and institutional context: organization, finance, intergovernmental relations, role of judiciary, personnel policies, lawmaking, planning through initiatives and referenda, and government tort liability. Letter grading.


242. Poverty and Inequality. (4) Lecture, three hours. Examination of relationship between urbanization and spatial inequality in U.S.—spatial dynamics of urban growth, levels and causes of spatial inequality, and implications of spatial inequality for low-income communities. Topics include concentrated poverty, residential segregation, immigrant neighborhoods, spatial disparities in access to opportunities, housing mobili-
254. Bicycle and Pedestrian Planning. (4) Lecture, three hours. Walking and bicycling are essential components of sustainable transportation systems. In response to growing concerns about access, safety, public health, equity, climate change, and community sustainability issues, many government agencies and private developers are planning to improve pedestrian and bicycle transportation. Exploration of field’s relationship to land use and transportation planning, public health, and environment. Development of ability to analyze major environmental policies and planning, including policies, programs, funding, and advocacy. In-class exercises and out-of-class planning projects. Letter grading.

255. Transportation Policy and Planning. (4) (Same as Public Policy M256.) Lecture, three hours. Overview of transportation finance and economics; concepts of efficiency and equity in transportation finance; historical evolution of highway and transit finance; current issues in highway finance; private participation in road finance; toll roads; road costs and cost allocation; truck charges, congestion pricing; current issues in transit finance; transit fare and subsidy policies, contracting and privatization of transit services. Letter grading.

256. Transportation Economics, Finance, and Policy. (4) (Formerly numbered M257.) (Same as Public Policy M222.) 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; transit fare and subsidy policies, contracting and privatization of transit services. Letter grading.

257. Transportation and Economic Outcomes. (4) (Formerly numbered 258.) Lecture, three hours. Examination of equity issues related to urban transportation; role of transportation policies in shaping future urban patterns; economic implications of growth and decline in urban areas; effects of land use and transportation policies on economic outcomes; role of transportation in improving economic outcomes for low-income and minority households and communities. Letter grading.

258. Transportation and Environmental Issues. (4) (Same as Public Policy M223.) Lecture, three hours. Overview of major economic structure linking transportation, air quality, and energy issues, chemistry of air pollution, overview of transportation-related approaches to air quality enhancement; new car tailpipe standards; vehicle inspection and maintenance issues; transportation demand management and transportation control measures; alternative fuels and electric vehicles; corporate average fuel economy and global warming issues; growth of automobility; automotive in sustainability debate. Letter grading.

260. Environmental Politics and Governance. (4) (Formerly numbered C260.) Lecture, three hours. Environmental planning is more than simply finding problems and fixing them. Each policy must be negotiated and implemented within multiple, complex systems of governance. Institutions and politics matter deeply. Overview of how environmental governance works in practice and how it might be improved. Letter grading.

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? How has it evolved? What are problems with traditional land-use control mechanisms? How well 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 basically precluded further extension of this system, decreasing growing pressure. Examination of environmental impacts, geography, use of water, and consideration of resource planning. S/U or letter grading.

263. Introduction to Environmental Policy. (4) (Formerly numbered 263.) (Same as Public Policy M252.) Lecture, three hours. Introduction to basic concepts and methods of environmental analysis covering variety of topics with cross-disciplinary perspectives. Development of major environmental and resource issues as well as to read, discuss, and write critically about environmental policy. Letter grading.

264A-264B. Environmental Law. (1 to 8 each) (Same as Law M290.) Lecture, three hours. Course M264A is enforced requisite to 264B. Examination of field of environmental law through analysis of various legal issues and public policy; 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 (264B) grading.

265. Environmentalisms. (4) (Formerly numbered 265.) (Same as Geography M265.) 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 increasing international (or international implications) of environmental practices as part of both green and black economies. What does integration of transportation and land use have in many ways gone slowly, subjectively, incrementally wrong. Study of theory and philosophy of transportation analysis; evidence of how planning for parking in U.S. has become planning for free parking. Exploration of new ways to improve planning for parking, transportation, and land use. Letter grading.

252. Transportation and Land Use: Transportation and Urban Design Studio. (4) Studio, three hours. Students of different backgrounds and interests collaborate and individually analyze and propose solutions to transportation problems through small teams. Course involves real-world professional planning project of type that students might be assigned if working for consulting firms or public agencies, and environment. Emphasis on evidence typically marshaled by transportation planning and design professionals, urban and site analysis capabilities, design and physical planning skills, and data analysis and design presentation and re-presentation abilities. Letter grading.

253. Travel Behavior Analysis. (4) (Formerly numbered M256.) (Same as Public Policy M221.) Lecture, three hours. Requisites: courses 207 and 220B, or Public Policy 201 and 203. Descriptions of travel patterns in metropolitan areas, recent trends and projections into future, overview of travel forecasting methods, trip generation, trip distribution, mode split, assignment, and analysis of traditional travel forecasting methods and new approaches to travel behavior analysis. 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 inequities. Letter grading.


247. Planning for Multiple Publics. (4) (Formerly numbered 251.) Lecture, three hours. Exploration of planning needs of various social groups in urban settings, using existing literature and research studies to determine appropriate mechanisms of planning for multiple publics. Analysis of communities in Los Angeles metropolitan area to gain insights into practical, theoretical, and methodological problems of planning for multiple publics. Generally taken in first year. S/U or letter grading.


249. Special Topics in Transportation Policy and Planning. (4) Lecture, three hours. Topics in transportation policy and planning selected by faculty members. May be repeated for credit. S/U or letter grading.

M250. Transportation, Land Use, and Urban Form. (4) (Formerly numbered M254.) (Same as Public Policy M220.) 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.

M251. Transportation and Land Use: Parking. (4) (Formerly numbered M251.) Lecture, three hours. Planning is key link between transportation and land use, but that link has been widely misunderstood. Transportation engineers typically assume that free parking simply reflects free market and are unaware of most trips, while urban planners treat parking as transportation issue that engineers must study. No profession is intellectually responsible for parking, and everyone seems to assume that something else is doing it. Hard thinking, mistakes in planning for parking help to explain why planning for transportation and land use has in many ways gone slowly, subjectively, incrementally wrong. Study of theory and philosophy of transportation analysis; evidence of how planning for parking in U.S. has become planning for free parking. Exploration of new ways to improve planning for parking, transportation, and land use. Letter grading.

C266. Global Environment and Development: Problems and Issues. (4) Lecture, three hours; discussion, one hour. Questions of population, resource use, Third World poverty, and environment. Analysis of global economic restructuring and its connections to changing organization of production and resulting
environmental impacts. Case studies from Africa, Latin America, Asia, and U.S. Concurrently scheduled with course M287. Lecture, two hours; discussion, two hours; outside study, nine hours. Designed for graduate students. Fundamental building blocks for successful management in nonprofit sector. Students develop management skills in strategic planning/problem solving, project management, team building, and negotiation. Use of outside speakers to illustrate how challenges from finance to crisis management to marketing, that nonprofit managers typically face. Letter grading.

M287. Nonprofit Sector, State and Civil Society. (4) (Same as Public Policy M226 and Social Welfare M2090S.) 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. Examples from social, political, and economic history of development 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.

M288. Leadership, Development, and Governance of Nonprofit Organizations. (4) (Same as Public Policy M228 and Social Welfare M241E.) Lecture, three hours; outside study, nine hours. Designed for graduate students. Varieties 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.

M289. Sprawl. (4) (Formerly numbered 253S.) Lecture, three hours; outside study, nine hours. Designed for graduate students. Technical processes of problem solving regarding substantial social welfare problems at community level. This form of community practice fills niche between professional and knowledge and skill set possessed by agency and program administrators on one hand and by policy analysts and policymakers on other hand. Letter grading.

M291. Introduction to Sustainable Architecture and Community Planning. (4) (Same as Architecture and Urban Design CM247A.) Lecture, three hours. Introduction to history and physical form of Los Angeles with emphasis on social, economic, and political issues in development of Los Angeles. Concurrently scheduled with course C184. Letter grading.

M292. Elements of Urban Design. (4) (Same as Architecture and Urban Design M271.) Lecture, three hours. Introduction of basic knowledge of elements and methods of urban design. Multidisciplinary approach leading to understanding of political, socio-
economic, and technological framework of urban systems and its dynamic interrelations. S/U or letter grading.

M239. Politics, Ideology, and Design. (4) (Same as Architecture and Urban Design M239.) Lecture, three hours. Exploration of cultural and political context of architecture and planning work. Examination of theory and practice from a variety of perspectives applied to a 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.

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. How definition of 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.

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) 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.

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/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, 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; workshop, 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 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. 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 Examination 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**

David Geffen School of Medicine

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http://urology.ucla.edu

Chair
Mark S. Litwin, M.D., M.P.H., F.A.C.S., 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 under-graduate 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)
Frank Heuser, Ph.D. (Music)
Angelia S.-Y. Leung, M.A., C.M.A. (World Arts and Cultures/Dance)
Willem Henri Lucas, B.A. (Design/ Media Arts)
Patricia A. Wickman, 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 multi-ple publics in general and specifically in relation-ship to the K-12 public school system, (2) introduce students to a potential range of ca-reers in the arts, including teaching artists, arts specialists, museum educators, arts adminis-trators, 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 insti-tutions, (3) contribute to improved communica-tion and interaction between the University, ex- tended Los Angeles community, K-12 public school system, and students in the arts, and (4) expand the School of the Arts and Architectur-e's commitment to University and commu-nity partnerships by linking teaching and re-search with undergraduate education, civic en-gagement, and support for institutional priorities to improve the quality of life for Los Angeles residents.

**Undergraduate Study**

**Visual and Performing Arts Education Minor**

The Visual and Performing Arts Education minor is intended to supplement the education of undergraduate students enrolled in the Archi-tectural Studies, Art, Dance, Design | 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 divi-sion requirements of their specific majors and Arts and Architecture M102 with a grade of B or better, be in good academic standing with an overall grade-point average of at least 2.7, and submit a minor application and a state-ment of interest, including any previous teach-ing and/or outreach experience.

Required Upper Division Courses (28 to 32 units): (1) Arts and Architecture M102, (2) two courses selected from Arts and Architecture 100, 101, 102, Art M186A/M186AL, Dance C145 (with consent of adviser), 166, 167, Ethnomusi-cology 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 | Media Arts, Eth-
nomusiology, 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 M192, M192SL) that includes a guided teaching experience.

A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor.

Each minor course must be taken for a letter grade. Successful completion of the minor is indicated on the transcript and diploma.

WOMEN’S STUDIES
See Gender Studies

WORLD ARTS AND CULTURES/DANCE
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Angelia S.-Y. Leung, M.A., C.M.A., Chair
David Delgado Shorter, Ph.D., Graduate Vice Chair
Victoria E. Marks, B.A., Undergraduate Vice Chair

Professors
Judith F. Baca, M.A.
Susan L. Foster, Ph.D.
David H. Gere, Ph.D.
Victoria E. Marks, B.A.
Peter Nabokov, Ph.D.
Allen F. Roberts, Ph.D.
Mary Nooter Roberts, Ph.D.
David J. Rousséve, B.A.
Peter M. Sellars, B.A.
Christopher A. Waterman, Ph.D.

Professors Emeriti
Judith B. Alter, Ed.D.
Donald J. Cosentino, Ph.D.
Irma Dosamantes-Beaudry, Ph.D.
Elise A. Dunin, M.A.
Pia S. Gilbert
Michael G. Jones, Ph.D.
Judy M. Milroma, M.A.
Colin H. Quigley, Ph.D.
Marta E. Savigliano, Ph.D.
Carol J. Scottorn, M.A.
Doris Siegel
Allegra Fuller Snyder, M.A.
Emma Lewis Thomas, Ph.D.

Associate Professors
Daniel Z. Froot, M.F.A.
Angelia S.-Y. Leung, M.A., C.M.A.
Janet M. D’Shea, Ph.D.
Lionel A. Popkin, M.F.A.
David Delgado Shorter, Ph.D.
Cheng-Chieh Yu, M.F.A.

Assistant Professors
Anurima Banerji, Ph.D.
Aparna Shitara, Ph.D.

Lecturers
Ginger Holquin
Patrick Polk, Ph.D.
Jason C. Tsou
Natsuo Tomin

Adjunct Professors
Simone Forti, B.F.A.
Rennie Harris

Adjunct Assistant Professor
Vij Prakash

Visiting Assistant Professor
Rosllynn K. Warby

Scope and Objectives
Guided by an interdisciplinary faculty of artists and arts scholars, the academic programs in the Department of World Arts and Cultures/Dance (WAC/DAN) have three overlapping missions: (1) the formulation of critical theoretical and intercultural insights into artistic creativity and the politics of representation, (2) the creation, theorization, and interdisciplinary study of dance and other body-based modes of performance, and (3) mutually beneficial engagement with the diverse cultural and artistic communities of Los Angeles.

The department is an interdisciplinary unit that finds its raison d’etre in a set of intellectual and artistic problems rather than an established academic discipline. By looking to world arts, the department seeks to decenter Western perspectives by recognizing that visual and performance art and other ways of knowing are situated locally and often made and distributed globally. Faculty members, who have international standing and are engaged in both creative artistic work and research, are interlocutors in dialogues about the frictions and flows implicated by the department’s name. As such, WAC/DAN is defined by a dynamic interdisciplinary approach that encourages intercultural literacies and repertoires, including transcending geography, ethnicity, class, and other distinctions of identity.

The undergraduate program offers majors in Dance and in World Arts and Cultures.

The B.A. in Dance thoroughly integrates learning to dance, learning to make dances, and critical interrogation of dance as a cultural practice. Students study a variety of dance techniques from around the world throughout their studies. They enroll in a four-term sequence in dance composition, with additional opportunities to participate in the creation of their own dances, as well as working as dancers in the creation of new works by faculty members and visiting artists. Further, they engage in a core of four courses in the study of scholarly discourse around the body and dance, launching a critical inquiry into their own study of bodily practices, internalization of the embodied experience, and how bodily ideas and embodied experiences are interpreted and communicated outwardly and interpersonally, both locally and globally.

The B.A. in World Arts and Cultures highlights culture and representation as key perspectives for understanding creativity in local and global contexts. Three areas of cross-cultural and interdisciplinary study are available: arts activism, critical ethnographies, and visual cultures. These areas define the department commitment to a range of practices, including ethnography, activism, visual and related expressive arts, documentary and short films, museum and curatorial studies, performance, and other creative perspectives and methods. Courses combine theory and practice and are grounded in culturally diverse artistic expressions.

All students are encouraged to complement the required set of core and elective departmental courses with others offered across campus, such as courses from ethnic and area studies programs, and may organize their courses of study in relation to particular interests or professional goals (e.g., international comparative studies, intercultural studies, education, area specializations such as Africa, Asia, or Latin America, minority discourse, gender studies).

The graduate program offers Master of Arts and Ph.D. degrees in Culture and Performance and a Master of Fine Arts in Dance, with an emphasis on choreography. Culture and performance studies research communities, cultures, and transnational movements through heritage and globalization studies, multi- and intercultural ethnographies, dance and theories of corporeality and embodiment, visual and material culture, critical museum and curatorial studies, documentary practice and Internet interventions, as well as arts activism and interdisciplinary art-making. The M.F.A. in Dance offers opportunities to engage multiple movement practices as students work on pioneering research in the form of new choreography. Students may focus on media, dance studies, theory, and theories of the body as supplements to their work as choreographers. The Art | Global Health Center within the department presents further opportunity for learning and practice.

While operating with considerable independence, the two graduate degree areas are unified by the department’s common concern for aesthetic production, corporeality and performance, the dynamics of tradition, and culture-building in contemporary societies. Connections are forged between critical theory and artistic practices, and attention is given to the changing social roles and responsibilities of artists, practitioners, and scholars of the arts in the U.S. and worldwide.

Undergraduates and graduates have excelled in fields including technology and the arts, videography, documentary work, public service, education, theatrical/events production, performing arts, urban planning, law, environmental activism, public health, and medicine. They have made careers in community nonprofits and activist groups, government agencies, museums, and arts foundations. Potential careers for M.A., Ph.D., and M.F.A. graduates
also include positions in research universities and colleges, and M.F.A. graduates are active as choreographers/performers in their own companies or with other professional organizations.

**Undergraduate Study**

**Dance B.A.**

All students take a set of courses as preparation for the Dance major that focus on the integration of dance and critical analysis. For students who transfer into the major, depending on the year of entry and prior coursework, lower division preparatory coursework may be waived or substituted. When students enter the major, they continue their studies of dance technique, composition, and analysis, and they also enroll in a primary and secondary research area. The three research areas are (1) creative inquiry as research, (2) critical dance studies, and (3) dance and civic engagement. The creative inquiry as research area is grounded in contemporary choreography with a focus on dance-making and performing in a wide range of genres from throughout the world. Opportunities are provided for students to present their own choreography, to participate in performances by others, and to study performance production and videography. The critical dance studies area focuses on study of scholarship examining the body and dance, in their cultural and historical contexts. Courses in dance history, dance and culture, and dance as an iden
tificatory practice are offered that enable students to analyze the rhetorical and ideological significance of dance. The dance and civic engagement area is grounded in the investigation and activist-oriented work of artists and the role of dance in the public sphere, and offers a wide range of courses in the nature of activism as well as opportunities for fieldwork, education, internships, and other forms of community involvement.

Students select one area as their primary area and another as their secondary area. Elective options provide further deepening of student knowledge and skills in any or all of the areas. Students may also consider courses from programs outside the department and may organize their course of study in relation to their particular interests.

Students who wish to confer with the departmental student affairs officer regarding program planning and major requirements should contact the undergraduate counselor at (310) 825-8537.

**Admission**

New students are admitted to the Dance major for Fall Quarter only. All applicants are reviewed individually, based on submission of a written research paper, transcripts, two letters of recommendation, and one personal essay. These supplementary materials are requested from students in mid-December, after the general UC application is received and processed, and are due back in the department in January. For freshman applicants, college placement test scores are also considered. Students must participate in a late January/early February audition. Specifics about the audition are included in the e-mail requesting the above-mentioned supplementary materials. Current UCLA students who petition to change their major are required to meet with the student affairs officer prior to application. They are required 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, a minimum 2.0 GPA in all departmental courses taken, and no more than 90 quarter units at the time of application. Students may apply at the beginning of Winter Quarter for admission into the program the following Spring or Fall Quarter. All students are required to audition in early Winter Quarter and may be interviewed as part of the application process.

**Preparation for the Major**

**Required:** Dance 1, 16, 44, 45, 67A, 67B, World Arts and Cultures 70.

**The Major**

The Dance major consists of 76 units of coursework.

**Required:** (1) Dance 101, 117A, 117B and (2) 10 units in the primary area and 5 units in the secondary area selected from the following: (a) creative inquiry as research — Dance 116, 117C, 118, 119, C122, 169, C171, World Arts and Cultures 170, 174A, 174B, C180, or other courses with faculty approval, (b) critical dance studies — Dance C145, 149, 150, C152, M157, 158, 159, 160, 161, C171, 182, World Arts and Cultures C168, 199, or other courses with faculty approval, (c) dance and civic engagement — Dance 165, 166, 167, C184, World Arts and Cultures 100A, 100B, 103, 144, 177SL, 195, or other courses 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 48 units of practice courses. A minimum of 8 units of the 48 must be at the upper division advanced level. Students are required to enroll in two technique courses each term until the units are fulfilled. Twenty-four units must be selected from Dance 6, 13, 15, 56, 63, 65, C106A, C113A, C115, 116; 24 units may be selected from Dance 7, 8, 9, 10, 11, 12, 57, 58, 59, 60, 61, 62, C109A, 110B, 111B, 112B, 159, 160, World Arts and Cultures 5, 55, 78, 114, 178. No more than 8 units of World Arts and Cultures 78 or 178 may be applied toward this requirement.

**Senior Honors Project**

Students may participate in a senior honors project consisting of 10 additional units. The project provides students with opportunities to demonstrate breadth and integration of knowledge and learned abilities from the major. The project may take various forms — from choreographic performance projects or an academic research paper to field/internship work in an identified area of research focus. With faculty advising, students must declare their intent to participate by Spring Quarter of their junior year. They identify a faculty mentor and work closely with that person on the development of the project, submitting a senior project proposal for faculty approval by the beginning of the senior year. In their senior year they enroll in a two-term course sequence (World Arts and Cultures 186A, 186B) to coordinate and present their research findings.

**World Arts and Cultures B.A.**

Three areas of cross-cultural and interdisciplinary study are available in the World Arts and Cultures major: arts activism, critical ethnographies, and visual cultures. Students are introduced to all three areas through introductory courses the first year and then by a pyramidal progression, they develop intermediate knowledge in two areas followed by advanced knowledge in the area selected as the individual specialty. Four lower division and three upper division core courses are required to establish interdisciplinary relationships between theory and discourse, methods, and experience. Representation is studied within societies — as people understand their own lives and the world around them — and then from the outside looking in through humanistic scholarship.

The major emphasizes hands-on activities such as internships to build skills necessary to participate in the required senior projects. In consultation with faculty advisers students select elective courses within and outside the department to increase knowledge of particular area studies, histories, literatures, theories, and methods.

Students who wish to confer with the departmental student affairs officer regarding program planning and major requirements should contact the undergraduate counselor at (310) 825-8537.

**Admission**

New students are admitted to the major for Fall Quarter only. All applicants are reviewed individually, based on submission of a written research paper, transcripts, two letters of recommendation, and one personal essay. These supplementary materials are requested from students in mid-December, after the general UC application is received and processed, and are due back in the department in January. For freshman applicants, college placement test scores are also considered.

Current UCLA students who petition to change their major are required to meet with the student affairs officer prior to application. They are required 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, a minimum 2.0 GPA in all departmental courses taken, and no more than 90 quarter units at the time of application. Students may apply at the beginning of Winter Quarter for admission into the program the following Spring or Fall Quarter. Students may be interviewed as part of the application process.
Preparation for the Major

**Required:** World Arts and Cultures 1, 20, 24, 33, and one 5-unit elective selected from course 22, M23, or 51W.

**The Major**

The World Arts and Cultures major consists of 45 units of coursework.

**Required:** (1) World Arts and Cultures 100A or 100B, 104, 124; (2) 12 units from the following three areas, including two courses from one area and one course from another: area 1 (arts activism) — World Arts and Cultures 103, 120 (with faculty approval), 144, C158, C159, 160, 174A, 174B, 177SL, 195, 199, area 2 (critical ethnographies) — courses 120 (with faculty approval), 121, C142, C150, C151, 174A, 174B, 195, 199, area 3 (visual cultures) — courses 120 (with faculty approval), M125A, M125B, M125C, M126, M130, 133, C138, 143B, C145, C152, 174A, 174B, C180, C182, C184, M187, 195, 199; (3) 8 additional units of upper division elective courses from inside or outside the department by petition; and (4) courses 186A and 186B (senior honors project) or equivalent coursework with faculty approval.

**Senior Honors Project**

All students must also complete World Arts and Cultures 186A and 186B (or two equivalent courses with faculty approval), the required senior honors project which must be selected from each student’s area of inquiry. Students begin to identify a project in Spring Quarter of their junior year and submit a senior project proposal for faculty approval by the beginning of the senior year. They begin to work with a designated faculty adviser in Fall Quarter of the senior year. Projects may include written theses, visual ethnographies, documentaries, installations, short films, internships, community service, field-based research, and curatorial projects, as well as other formats. Projects are crafted in close consultation with a faculty advisor as to provide capstone experiences that draw together ideas and abilities from four years of study, while positioning students for postgraduate opportunities for further study or for entrance to job markets.

**Dance**

**Lower Division Courses**

1. **Global Perspectives on Dance.** (5) Lecture, three hours; discussion, one hour. Examination of practices of choreography, improvisation, and technique in different cultural settings and historical eras. Introduc-
tion to field of dance studies through analysis of broad spectrum of philosophies and practices within global context, with focus on creative act of dance-making, thinking and understanding act of improvising, and diverse ways of training one’s body. By fram-
ing process of analysis within array of historical peri-
ods and cultural settings, development of capacity to
engage with dance as lived social and artistic practice
while refining critical seeing, thinking, and writing
skills. P/NP or letter grading.

2. **Beginning 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 Africa
and Diaspora, including Brazil and Afro-Caribbean. Variable topics, such as dance of Guinea, Mali, and Senegal or Afro-Caribbean masking traditions, in cul-

tural and historical context. May be repeated for cred-

3. **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.

4. **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 Mexican folklór, dances, in cultural and historical context. May be repeated for credit without limitation. P/NP or letter grading.

5. **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.

6. **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 Bei-
ing 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.

7. **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 and extending to cultures of South Asian diaspo-
ras, including communities in India and West Afri-
cia. Variable topics, such as Bharata Natyam (classi-
cal 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.

8. **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 diaspo-
ras, including communities in England and West Afri-
cia. Variable topics, such as Bharata Natyam (classi-
cal 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.

**Graduate Study**

Official, specific degree requirements are de-
tailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website, http://grad.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 Department of World Arts and Cultures of-
ers Master of Arts (M.A.) and Doctor of Philos-
ophy (Ph.D.) degrees in Culture and Perfor-
mance and a Master of Fine Arts (M.F.A.) de-
gree in Dance.
Upper Division Courses

101. Theories of Dance. (5) Lecture, four hours; discussion two hours. Enrollment requisite: course 45. Ideas of dance, choreography, and movement have achieved broad resonance in contemporary performance, art, politics, culture, and studies of social behaviors. Historical approaches to dance studies and deployments of its vocabulary, within field and beyond, concentrated in four principal approaches: history, ethnography, choreographic analysis, and critical theory. How do ideas in dance studies inform and be informed by cultural and historical context. May be repeated for credit without limitation. P/NP or letter grading.

61. Intermediate World Arts Practices in South Asia and Diaspora. (2) (Formerly numbered World Arts and Cultures C61A.) Studio, three hours. Intermediate-level study of world arts practices originating from South Asia or from cultures of South Asian diasporas, 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.

62. Intermediate World Arts Practices in Southeast Asia and Diaspora. (2) (Formerly numbered World Arts and Cultures 62.) Studio, three hours. Intermediate-level study of world arts practices originating from Southeast Asia, Variable topics, such as Cambodian dance, Balinese legong, in cultural and historical context. May be repeated for credit without limitation. P/NP or letter grading.


65. Intermediate Modern/Postmodern Dance. (2) (Formerly numbered World Arts and Cultures 65.) Studio, four hours. Technical training with emphasis on increasing skill. May be repeated twice for credit. P/NP or letter grading.

67A. Theories and Methods in Dance Composition I: Languages. (4) (Formerly numbered World Arts and Cultures 67A.) Seminar, two hours; studio, two hours; outside study, eight hours. Enforced requisites: course 16. Examination of diverse movement sources from which dances are made. How do different choreographers envision vocabularies of movement they use? How do they sequence movement and distinguish between different movements of which they create dance? Answers to these questions in relation to broad range of artistic approaches, acknowledging that dance-making occurs distinctly in different cultural contexts and different historical moments. Readings about and viewing of videos of selected artists’ work and their different strategies for creating languages of their dances for comparison. Use of these analyses to assist in creative process for making new dances. P/NP or letter grading.

67B. Theories and Methods in Dance Composition II: Processes. (4) (Formerly numbered World Arts and Cultures 67B.) Seminar, two hours; studio, two hours; outside study, eight hours. Enforced requisites: course 67A. Examination of diverse processes through which creation of dance can take place. How do different choreographers conceptualize creative process of dance-making? What kinds of strategies do they use for sequencing their materials? Answers to these questions in relation to broad range of artistic approaches, acknowledging that dance-making occurs distinctly in different cultural contexts and different historical moments. Readings about and viewing of videos of selected artists’ work and their different strategies for creating languages of their dances for comparison. Use of these analyses to assist in creative process for making new dances. P/NP or letter grading.

110A. Advanced World Arts Practices in Sub-Saharan Africa and Diaspora. (2) (Formerly numbered World Arts and Cultures C106A.) Studio, three hours; outside study, three hours. Advanced-level study of world arts practices originating from sub-Saharan Africa and its diasporic contexts, concentrating on different forms and ways of making dance and its relationship to other art forms. Lectures illustrated with demonstrations, films, and slides. P/NP or letter grading.

110B. Dance in East Asia. (4) (Formerly numbered World Arts and Cultures C110B.) Lecture, four hours. Survey of dances of Japan, China, and Korea and factors that have influenced their development and social function. Consideration of relationship of dance to other art forms. Lectures illustrated with demonstrations, films, and slides. P/NP or letter grading.

111B. Dance in South Asia. (4) (Formerly numbered World Arts and Cultures C111B.) Lecture, four hours. Survey of dances of India, Pakistan, and Sri Lanka. Fac of dance, focusing on influencing development of dance, its social function, and its relationship to other art forms. Lectures illustrated with demonstrations, films, and slides. P/NP or letter grading.

112B. Dance in Southeast Asia. (4) (Formerly numbered World Arts and Cultures 112B.) Lecture, four hours. Survey of selected ritual, social, and court dances of Indonesia, Cambodia, Thailand, and Philippines. Social, historical, and aesthetic factors. Lectures illustrated with demonstrations, films, and slides. P/NP or letter grading.

113A. Advanced World Arts Practices in Europe and Diaspora. (2) (Formerly numbered World Arts and Cultures C113A.) Studio, three hours; outside study, three hours. Advanced-level study of world arts practices originating from Europe and extending to cultures of European diaspora, including U.S. African-American dance, Balinese dance, and classical ballet, in cultural and historical context. May be repeated for credit without limitation. Concurrently scheduled with course C431A. P/NP or letter grading.

115. Advanced Modern/Postmodern Dance. (2) (Formerly numbered World Arts and Cultures C115.) Studio, six hours. Requisite: course 65. Studio in advanced modern/postmodern dance technique, with emphasis on improvisation. Students 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 projection. May be repeated twice. P/NP or letter grading.

117A. Theories and Methods in Dance Composition III: Locations. (4) (Formerly numbered World Arts and Cultures 117A.) Seminar, two hours; studio, two hours; outside study, eight hours. Enforced requisites: courses 16, 67A, 67B. How location and practice of dances are considered when locating dance in one particular place? Answers to these questions in relation to broad range of artistic approaches, acknowledging that dance-making occurs distinctly in different cultural contexts and different historical moments. Examination of range of locations for dances, including prosenium stages, theaters in round, parks, side-walks, temples, amphitheaters, village squares, and other site-specific locations that endow dance with specific significance 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; outside study, eight hours. Enforced requisites: courses 16, 67A, 67B. How does dance impact its audiences? Answers to these questions in relation to broad range of artistic approaches, acknowledging that dance-making occurs distinctly in different cultural contexts and different historical moments. Different approaches to dance result in highly distinctive kinds of responses from audiences. Focus on considerations of three in-depth concerns, each of which endeavors to construct distinct kind of response from viewers. 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 employ two or more disciplines, such as dance, music, visual art, performance art. Theoretical engagement with selected topics through lectures, readings, and discussion. Thematic topics include contemporary issues and concerns such as identity, home, history, and memory; multiculturalism; constructing identity. 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 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.

119. Advanced Intercultural Composition. (4) (Formerly numbered World Arts and Cultures 119.) Lecture, four hours; studio, two hours. Enforced requisites: courses 67A, 67B. Directed exploration in composition, with focus on works that engage techniques and practices of two or more cultures. Engagement with postcolonial theory through lectures, readings, and discussions. May be repeated for credit without limitation. P/NP or letter grading.

C122. Music and Dance Collaborations. (4) Studio, four hours. Opportunity for directors, choreographers, and composers to work together creating and developing musical scores for dance. Exploration of different forms and ways of approaching creative process of making dance and music, presenting material on weekly basis, and developing skills for discussion, critique, and review. Concurrently scheduled with course C222, P/NP or letter grading.
C145. Selected Topics in Dance Studies. (4) (Formerly numbered World Arts and Cultures C145.) Lecture, four hours; laboratory, study, eight hours. Designed for juniors/seniors. Selected topics in study of dance and corporeality. Consult Schedule of Classes for topics to be offered in specific term. May be repeated for credit with different topics. Concurrently scheduled with course C245. P/NP or letter grading.

149. Dance in Multicultural U.S. (4) (Formerly numbered World Arts and Cultures 149.) Lecture, two hours; discussion, one hour; laboratory, one hour. Designed for social sciences. Study of dance performance in U.S., with emphasis on genres that can be viewed in multicultural Los Angeles, from concert modern/postmodern dance, Mexican folklorico, and Japanese Noh, and video and dance film. Attention to genres from Native America, Americas, Oceania, Asia, Africa, and Europe. Student projects involve creation of in-class performances. 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, one hour. Study of dance in historical and cultural context, in how it attends to and shapes 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 training 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. Rechorography: 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 political/cultural idea broadly defined as scored movement and organization of behavior and body, as a creative process as well as a formal expression of ideas, creative tool, or product. Viewing and discussion of work, and embodying ideas through movement and dance-making. P/NP or letter grading.

158. Choreography Gender. (4) (Formerly numbered World Arts and Cultures 158.) Lecture, three hours; laboratory, two hours. Designed for juniors/seniors. Analysis of aesthetic codes and theatrical choreographic approaches as they intersect with construction of gender in U.S., with close attention to race, class, and sexuality. P/NP or letter grading.

159. Movement Theories. (2) (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 creatively analyze and develop. 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 for dancers, and study of biological and physical principles of human movement as related to dance. May be repeated for credit without limitation. P/NP or letter grading.

161. Movement Observation and Analysis. (4) (Formerly numbered World Arts and Cultures 161.) Lecture, two hours; studio, two hours. Designed for juniors/seniors. Use of variable theoretical frameworks and techniques such as labanotation 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 students preparing for supervised teaching practicum. 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 ethnic 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 concepts, skills, and principles for teaching children’s dance; emphasis on dance as creative means of expression. P/NP or letter grading.

169. Repertory Tour Ensemble. (2 or 4) (Formerly numbered World Arts and Cultures 169.) Lecture, two hours; studio, four to six hours. Designed for World Arts and Cultures majors. Creation and presentation of professional performance, emphasizing team work on problems of touring companies with variable repertoires. 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, four hours. Foundation 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 credit without limitation. 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, film, and video and exploration of new aesthetic when they are combined. Analysis of record and documentary dance film, choreo-cinema, and impact of MTV, as well as integration of media with performance. Letter grading.

C184. Production Arts Seminar. (4) (Formerly numbered World Arts and Cultures C184.) Seminar, four hours. Theory and practice of production administration, including hands-on producing of public events in arts and academia. Topics include, but are not limited to, history and theories of producing, mission statements, budgeting, marketing, public relations, fundraising, legality, and archiving. 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 for students who 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.

C222. 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 original material in their respective disciplines. Exploration of different forms and ways of approaching creative process of making dance and music, presenting material on a weekly basis, and developing skills for discussion, critique, and review. Concurrently scheduled with course C122. S/U or letter grading.

225A/225B. Theories of Movement: Labanotation. (4) (Formerly numbered World Arts and Cultures 225A/225B) 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 awareness and to understand role of movement in dance, nonverbal behavior, and cross-cultural dance studies. Focus on complex movement patterns and timing. S/U or letter grading.

C243. Research Methods and Bibliography in Dance. (4) (Formerly numbered World Arts and Cultures 243.) Lecture, four hours. Survey of methods for scholarly analysis of dance materials using systems from social sciences, physical sciences, and humanities. S/U or letter grading.

C245. Production Arts Seminar. (4) (Formerly numbered World Arts and Cultures C245.) Seminar, four hours. Theory and practice of production administration, including hands-on case studies 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, fundraising, legality, and archiving. Concurrently scheduled with course C184. S/U or letter grading.

C245. Selected Topics in Dance Studies. (4) (Formerly numbered World Arts and Cultures C245.) Lecture, four hours; laboratory, two hours. Designed for graduate students. Selected topics in study of dance and corporeality. Consult Schedule of Classes for topics to be offered. May be repeated for credit without limitation. Concurrently scheduled with course C145. S/U or letter grading.

C252. History and Theory of Modern/Postmodern Dance. (4) (Formerly numbered World Arts and Cultures 252.) Lecture, four hours; laboratory, two hours. Designed for students preparing for modern/postmodern dance instruction. Survey of events 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 C152. P/NP 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 credit without limitation. Concurrently scheduled with course C171. S/U or letter grading.

C406A. Advanced World Arts Practices in Sub-Saharan Africa and Diaspora. (2) (Formerly numbered World Arts and Cultures C406A) Studio, three hours; outside study, three hours. Advanced-level study of world arts practices originating from sub-Saharan Africa and African diaspora. Variable topics and genres, such as West Africa (Burkina Faso, Mali, Guinea, Senegal) and diaspora (Haiti, Brazil, Caribbean, Cuba), including cultural and historical context. May be repeated for credit without limitation. Concurrently scheduled with course C106A. 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 improvisation, 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 extending to cultures of European diaspora, including U.S. Variable topics, such as flamenco, Balkan folk dances, and...
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 in intercultural, interdisciplinary arts, and performance, emphasizing interactions among various modes of creative expression, role of style in daily life, representative performance of cultural identity and difference, and interaction of diverse artistic traditions. Letter grading.

2. Lower Division Seminar. (5) Formerly numbered World Arts and Cultures 492.) Seminar, four hours; outside study, 11 hours. Variable topics with focus on scholarly and practice-based research in arts. In-depth investigation 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, arts 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/or practice-oriented processes. Substantial culminating project integrating theoretical and practical components of selected seminar topic required. May be repeated for credit.

3. 51W. Aliens, Psychics, and Ghosts. (5) Lecture, three hours; discussion, one hour. Introduction to study of indigenous worldviews as they are expressed through art, mythology, ritual, health practice, languages, and ecology. Mythology, ritual, health practice, languages, and ecology. Using examples spanning globe, considering of issues of colonialism, tradition, religious change, and legal and social implications of epistemological differences between people. Examination of critical perspectives on social development, historical progress, and intellectual assimilation. P/NP or letter grading.

4. 51S. Ecologies of Difference. (5) Lecture, three hours; discussion, one hour. Introduction to critical perspectives on social development, historical progress, and intellectual assimilation. P/NP or letter grading.

5. 78. Private Instruction in World Arts and Cultures. (2) Studio, one hour. One or more hours. Private or semiprivate instruction in one world arts practice with distinguished community-based artist to be arranged by student and approved by instructor. One's ability to distinguish between right and wrong action is culturally intuited, nurtured, and developed. Study of cultural strategies of moral engagement, performativity, and inquiry into public life, including acts of conscience and civil disobedience. P/NP or letter grading.

6. 80. Video Tools and Techniques. (2) Laboratory, four hours. Introduction to video tools and practices to train students in key techniques of video production. Basic skills spanned to develop short videos for circulation via DVD and/or Internet. Practical exercises based on materials and instruction provided in class, spanning production and postproduction processes of video making. Evaluation of student on these exercises and final submission of edited sequence of any or all materials developed during course. Training in theoretical and technical production and usage of video tools. P/NP or letter grading.

85. Sophomore-Year Proposal. (1) Lecture, 90 minutes. Planning and execution of proposal for junior year of study, with attention to exploring resources of department and University as whole. P/NP grading.

Upper Division Courses

100A. Art as Social Action. (5) Lecture, four hours; discussion, one hour. Designed for juniors/seniors. Discussion of what constitutes artist's social responsibility and in what ways art is qualified to engage in direct political action. Study of tension between powers of this world and powers of art. P/NP or letter grading.

100B. Art as Social Action. (5) Lecture, four hours; discussion, one hour. Designed for juniors/seniors. One's ability to distinguish between right and wrong action is culturally intuited, nurtured, and developed. Study of cultural strategies of moral engagement, performativity, and inquiry into public life, including acts of conscience and civil disobedience. P/NP or letter grading.

101. Theories of Performance. (5) Lecture, four hours; studio, two hours. Performance commonly refers to activities on paper or in print. One’s ability to distinguish between right and wrong action is culturally intuited, nurtured, and developed. Study of cultural strategies of moral engagement, performativity, and inquiry into public life, including acts of conscience and civil disobedience. P/NP or letter grading.

102. Seminar: Intercultural and Interdisciplinary Performance. (4) Seminar, four hours. Required course 101. Recent discussions of multiculturalism have demanded a broader base of cultural literacy for society in general and from artists in particular. Moving beyond stereotyping and formalism, focus on areas of overlap and exchange, collaborations, collectives, creation, hybridization, and possibilities of video and extended media. P/NP or letter grading.

103. Arts in Communities. (5) Lecture, four hours. Introduction to theoretical and practical understanding of field of community art by and for multiple publics. Review of relevant issues in field and exploration of roles of artists and arts organizations in struggles for social change, representation, and community building. Through national and international examples, exploration of art works that emphasize participation of citizens in community-based and culturally relevant performance, art, and exhibition. Examination of processes of creative thinking, community involvement, collaborative entry into research, and education in community arts. Letter grading.


114. Performance Practicum. (1 to 4) Studio, three to 12 hours. Rehearsal and performance in selected community-based or theatrical work. May be repeated for credit without limitation.

120. Selected Topics in Cultural Studies. (4) Lecture, three hours. Designed for juniors/seniors. Selected topics in interdisciplinary study of arts and performance in cultural and historical context. Consult classical ballet, in cultural and historical context. May be repeated for credit without limitation. Concurrently scheduled with course C113A. S/U or letter grading.

415. Advanced Modern/Postmodern Dance. (2) (Formerly numbered World Arts and Cultures 415.) Studio, six hours. Required course. Five courses. Studies in advanced modern/postmodern dance technique, with emphasis on performance skills. May be repeated for credit without limitation. Concurrently scheduled with course C115. 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 and understanding of production components in roles of stage manager, production assistants, 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 4) (Formerly numbered World Arts and Cultures 490.) Tutorial, one three-hour rehearsal per unit per week minimum. Creation, casting, and rehearsing of culminating concert, reflecting professional achievement. Performance in first term and second term, direction of on-stage rehearsals for culminating concert by each student leading to fully staged performance. May be repeated for maximum of 15 units. S/U or letter grading.

498. Professional Internship in Dance. (4, 8, or 12) (Formerly numbered World Arts and Cultures 498.) Seminar, to be arranged. Full- or part-time supervised fieldwork. Limited to M.F.A. students. Internship in dance. Field study, two hours minimum. Supervised fieldwork, independent study, and culminating concert. Internship may intervene in people's lives in active, instrumental ways. Use of specific case studies to illustrate and interrogate theoretical paradigms. P/NP or letter grading.

33. Indigenous Worldviews. (5) Lecture, three hours; discussion, one hour. Introduction to study of indigenous worldviews as they are expressed through art, mythology, ritual, health practice, languages, and ecology. With examples spanning globe, consideration of issues of colonialism, tradition, religious change, and legal and social implications of epistemological differences between people. Examination of critical perspectives on social development, historical progress, and intellectual assimilation. P/NP or letter grading.

51W. Aliens, Psychics, and Ghosts. (5) Lecture, three hours; discussion, one hour. Enforced requisite: English 36. Lecture, 90 minutes; discussion, one hour. Introduction to study of indigenous worldviews as they are expressed through art, mythology, ritual, health practice, languages, and ecology. With examples spanning globe, consideration of issues of colonialism, tradition, religious change, and legal and social implications of epistemological differences between people. Examination of critical perspectives on social development, historical progress, and intellectual assimilation. P/NP or letter grading.

51S. Ecologies of Difference. (5) Lecture, three hours; discussion, one hour. Introduction to critical perspectives on social development, historical progress, and intellectual assimilation. P/NP or letter grading.

78. Private Instruction in World Arts and Cultures. (2 to 4) Studio, three to six hours. Designed for freshmen/sophomores. Private or semiprivate instruction in one world arts practice with distinguished community-based artist to be arranged by students and approved by instructor. May be repeated for maximum of 24 units. P/NP grading.

20. Culture: Introduction. (5) Lecture, four hours. Introduction to key concepts and major theoretical and methodological approaches to the study of culture, including discussion of notions of culture, popular culture, subculture, youth culture, hegemony, gender, race, class, and national identity. Letter grading.

21. Introduction to American Folklore Studies. (5) Lecture, four hours; discussion, one hour; outside study, 10 hours. Cultural/historical survey of role of folklore in development of American civilization and of influence of American experience in shaping folklore in American society; attention also to representative areas of inquiry and analytical procedures. P/NP or letter grading.

22. Introduction to American Indian Studies. (5) (Same as American Indian Studies 416.) 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.

24. World Arts, Local Lives. (5) Lecture, three hours; discussion, one hour. Use of Fowler Museum's long-term exhibition entitled "Intersections: World Arts/Local Lives" as object of study to examine many insights that art can offer into social, political, and religious experiences. Cultures of Africa, Asia, Pacific, and indigenous Americas, both ancient and contemporary, consideration of degree to which notions of aesthetics and efficacy are intertwined and intermediate. Art in societies may intervene in people's lives in active, instrumental ways. Use of specific case studies to illustrate and interrogate theoretical paradigms. P/NP or letter grading.

31. Comparative Studies, S/U or letter grading.
121. Ethnography and Performance. (4) Lecture, four hours; outside study, eight hours. Survey of some ways that ethnography and performance intersect, as well as development of some preliminary approach to documentation performance events. Reading of ethnographies of performances, as well as consideration of how performances can work ethnographically. P/NP or letter grading.

122. Introduction to Folklore. (4) Lecture, four hours. Surveys of folklore in past and present. Approaches to their identification, description, and analysis, including their historical and social significance. Introduction to expressive behavior of folk groups from throughout the world, and comparison through readings, lectures, film, and fieldwork, with attention to artistic, religious, and other traditions in relation to evolving popular culture. P/NP or letter grading.

C123. Art 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 C223. P/NP or letter grading.

124. Introduction to Field-Based Research Methods. (8) (Same as Gender Studies CM120.) Lecture, six hours; fieldwork, one hour. Introduction to methods, techniques, and issues in conducting field-based research, including nature, uses, and limitations of major data-gathering procedures. Sampling, ethical concerns, handling of data, and controls, teamwork, interventions, and results not only tangible and interpersonal outcomes of inquiry but also personal and intangible. Through readings, discussion, and hands-on exercises, students learn how to plan fieldwork projects and write proposals, prepare consent forms and deal with ethical issues, observe behavior, construct questionnaires, interview, use audiovisual materials to collect data, and manage and present data. P/NP or letter grading.

M125A. Beyond Mexican Mural: Beginning Muralism and Community Development. (4) (Same as Art M186A and Chicana and Chicano Studies M186A.) Studio/lecture, four hours. Requisite: course M125AL. Investigation of muralism as method of community education, development, and empowerment. Exploration of issues through development of large-scale collaborative digitally created image and/or painting for placement in community. Students research, design, and work with community participants. P/NP or letter grading.

M125B. Beyond Mexican Mural: Intermediate Muralism and Community Development. (4) (Same as Art M186B and Chicana and Chicano Studies M186B.) Studio/lecture, four hours. Requisites: courses M125A, M125AL. Continuation of investigation of muralism as method of community education, development, and empowerment. Exploration of issues through development of large-scale collaborative digitally created image and/or painting for placement in community. Students research, design, and work with community participants. P/NP or letter grading.

M125C. Beyond Mexican Mural: Advanced Muralism and Community Development. (4) (Same as Art M186C and Chicana and Chicano Studies M186C.) Lecture, six hours. Requisites: courses M125B, M125BL. Corequisite: course M125CL. Continuation of investigation of muralism as method of community education, development, and empowerment. Exploration of issues through development of large-scale collaborative digitally created image and/or painting for placement in community. Students research, design, and work with community participants. P/NP or letter grading.
C155. Self and Culture. (4) Lecture, two hours; laboratory, two hours; outside study, eight hours. Designed for juniors/seniors. Examination of critical developmental processes and situational factors contributing to construction of sense of self and emergence of creativity and subjective relatedness in different cultural contexts. Concurrently scheduled with course C252. P/NP or letter grading.

C156. 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 political context, (2) Kahlo’s personal rise to mésozize and machismo, and (3) the patriarchal belief that female artists living in patriarchal societies had to confront, a negative concept and kind of artwork she produced. Concurrently scheduled with course C256. P/NP or letter grading.

C157. Theorizing Arts Activism. (4) Seminar, three hours. Historical and cultural context of arts activism to provide context for concerted analysis, creation, and protest. Readings include theoretical texts and current performance histories. Consideration of one particular, yet diverse, activist project with focus on the ongoing activism sponsored by UCLA Art and Global Health Center. Arts activist projects organized by seminar members supported and encouraged. Concurrently scheduled with course C257. P/NP or letter grading.

C159. Art and Global Health. (4) Seminar, three hours. Exploration of interface of arts and health-based methodologies in pursuit of improved health outcomes, using cases from international projects created and supported by UCLA Art and Global Health Center. Readings include texts by artists and art scholars and articles from public health and medical literature. Seminar members propose their own arts-based health promotion interventions. Concurrently scheduled with course C259. P/NP or letter grading.

C160. Performing Sexual Health: UCLA Sex Squad. (4) Seminar, three hours. The UCLA Sex Squad is a student-run health education theater as it has been used both locally and globally. Examination specifically of how humor, personal narrative, and nonjudgmental pro-sex approaches have been used to create open empowering and educational dialogues about sexual health by and for diverse range of communities. Intensive training on sex, sexuality, HIV/AIDS, and powerful history of others’ interventions to open urgent dialogues on these taboo topics. P/NP 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. Exploration of new modes of (and venues for) writing that rebalance power differential between art makers and commentators. Concurrently scheduled with course C264. P/NP or letter grading.

C168. Beyond 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/NP or letter grading.

C170. Advanced Production. (1 to 2) Laboratory, three hours; outside study, up to three hours. Requisite: course 70. Further development and application of practical production processes and events in department, including but not limited to theatrical support and planning and executing lecture series. Provides students with advanced practical knowledge necessary, as well as opportunity to study nature of this component in world arts and cultures/dance studies. May be repeated for credit with different emphasis. P/NP or letter grading.

C173. Sound Resources for Performance. (4) Lecture, three hours; studio, one hour; outside study, eight hours. Designed for seniors. Exploration of the search for sonic resources. Emphasis on investigation of musical possibilities via record store, Internet, and music library; environmental sounds and patterns; body (clapping, stepping, and singing); and human voice. (Found and sculptural sounds may be used.) Concurrently scheduled with course C273. P/NP or letter grading.

C174. Projects in World Arts and Cultures. (2) Laboratory, two hours. Design of major projects in choreography, performance, cultural studies, production, and media. May be repeated for credit. P/NP or letter grading.

C178. Advanced Private Instruction in World Arts and Cultures. (2 to 8) Studio, three to 12 hours. Designed for juniors/seniors. Private or semiprivate instruction in one world arts and culture through one-on-one instruction designed by students in collaboration with selected community organizations and institutions. Reflection on impact of service on communities and theories. May be repeated once for credit. P/NP or letter grading.

C180. Video Production in Arts. (4) Lecture, one hour; laboratory, three hours. Fundamentals of video production: conceptualization, field recording (camera, lighting, sound, coverage), and editing (organizing raw footage, constructing program, mastering finished tape). Emphasis alternates quarterly between ethnographic documentary and danced choreography. May be repeated once for credit. Concurrently scheduled with course C280. Letter grading.

C182. Film and Feminism. (5) Lecture, three hours. For juniors/seniors. Introduction to feminist film theory to develop skills for feminist interpretations and analysis of films from classical and postclassical Hollywood cinema, experimental film, and Indian cinema. Examination of psychoanalytical feminist, postfeminist film, and postcolonial theories. Concurrently scheduled with course C282. P/NP or 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 film as a medium for folklore, and examples of films by, with, and for folklore. Concurrently scheduled with course C283. P/NP or letter grading.

185. Junior-Year Proposal. (1) Lecture, 90 minutes; outside study, 90 minutes. Limited to World Arts and Cultures majors. Students submit proposal to faculty sponsor (either senior focus or senior honors project) for senior year study, with attention to exploring resources of and Department and University as whole. May be repeated once for credit. P/NP grading.

186A-186B. History of Projects in World Arts and Cultures. (S-S) Lecture, four hours; outside study, 11 hours. Course 186A is requisite to 186B. Limited to senior World Arts and Cultures majors. Applicability of concepts and content from interdisciplinary major to individual projects. Methodologies may include critical, comparative, ethnographic, and performance approaches. Lecture/seminar format for World Arts and Cultures faculty during first term; faculty-directed presentations of individual projects during second term. Letter grading.

M187. Indigenous Film. (5) Same as American Indian Studies M188.) Lecture, four hours; discussion, one hour. Introduction to study of indigenous filmic images and representations, with focus on selected ethnographic, documentary, animated, and feature films ranging from 1920 to present. P/NP or 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. 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.

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. Culminating paper or project required. May be repeated for maximum of 8 units. Individual contract required. P/NP or letter grading.

Graduate Courses

200. Theories of Culture. (4) Seminar, three hours; outside study, nine hours. Introduction to history of culture concept in arts, humanities, and social sciences. Analysis of contemporary debates concerning ownership and use of word "culture" and cultural exclusion 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, readings, and performance practices. Examination of ways in which "performance" is defined and deployed by scholars working in disciplines of anthropology, dance, folklore, linguistics, literature, musicology, performance studies, philosophy, sociology, and theater. S/U or letter grading.

202. Research Methodologies. (4) Seminar, three hours; outside study, nine hours. Hands-on course designed to help students develop understanding of many developed qualitative research methods and designs they encounter in their work. Identification and creation of research problems, development of designs, actual data collection, and analysis procedures to address those problems. S/U or letter grading.

203. Proseminar: Dance Studies. (4) Seminar, three hours; outside study, nine hours. Survey of theoretical issues and perspectives on dance and body movement in cultural, social, and historical contexts. 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 identities), and analysis of dance and other somatic modes of performance. S/U or letter grading.

205. Folklore Theories and Methods. (4) Lecture, three hours; outside study, nine hours. Introductory course in critical, quantitative, and current trends, including methodological 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 topics in folklore, 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) 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 practices of ethnographic representation. S/U or letter grading.

210. Ethnography of and as Colonialism. (4) Seminar, three hours. Beginning with 1550 debates over Indian humanity and ranging to contemporary scholarship about anthropology and the intersections of writing, colonialism, violence, and historiography in America. Exploration of relationships between 18th-century reasoning about race and post-independence, World War II and present-day practices of writing history. Development of critical stance on utility of postcolonial theories as such perspectives bear on anthropology, with examples from indigenous, labour, and religious regions. Includes Columbia, 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 of documenting individual narrators and interpreting their stories and repertories; how oral narratives mediate the passage of life stories, are mediated by goals and motivations of narrators; how oral narratives are performed; how stories are communicated through narrating, modes of representing, and performance of oral and narrative 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 about authors, narrators, audiences, and performance in social and historical context. May be repeated for credit without limitation. S/U or letter grading.

223. Arts of Identity: Survey of Expressive Cultures. (4) Lecture, three hours. Introductions to study of arts and performance, and creativity in cultural context. Special attention to relationships between arts and identity and to role of intellectuals in cultural survival and transformation. Concurrently scheduled with course C213. S/U or letter grading.

229. Food Customs and Symbolism. (4) Lecture, four hours. Introduction to foodways, with particular attention to customs and symbolism in America. Topics include sensory realm, child rearing practices, foodsharing, food and identity, food and its emotional significance, aversions and taboos, advertising, changing food habits, and American diet. Concurrently scheduled with course C129. S/U or letter grading.

238. American Indian Arts in Performance. (4) Seminar, four hours. Acquisition of awareness and sensitivity to dynamic contexts within Native American worlds of performance and material culture and development of ability to focus on them and learn to conduct research on them. Examination of wide range of American Indian performance arts, and most possible range of such contexts, with performance given its most generous definition. Study of spectrum of genres, including architecture, social and dance, masquerade, and representation of role of myth in academic culture. Examination of performances that are disruptive life-cycle changes that have potential to promote self-regeneration or self-fragmentation and (2) external transitions that are situational catastrophic events that evoke great terror and trigger fears of annihilation and chaos, but if successfully negotiated, have potential to promote revitalized sense of self as essential for others, and restored sense of trust and hope in humanity. Concurrently scheduled with course C147. S/U or letter grading.

246. Politics of Performance. (4) Seminar, four hours; outside study, eight hours. Designed for graduate students. Opportunity for professional and academic intellectuals as cultural workers operating in domains of ideology, aesthetics, and theory. Analysis of such keywords as ideology, aesthetics, theory, art, politics, intellectual, academy, and academic. Concurrently scheduled with course C146. S/U or letter grading.

247. Arts and Healing. (4) Lecture, four hours. Interdisciplinary, contemporary arts-based model of healing applicable to persons leading Western modernist lifestyles and coping with two kinds of social crises during their lifetimes: (1) developmental transitions that are disruptive life-cycle changes that have potential to promote self-regeneration or self-fragmentation and (2) external transitions that are situational catastrophic events that evoke great terror and trigger fears of annihilation and chaos, but if successfully negotiated, have potential to promote revitalized sense of self as essential for others, and restored sense of trust and hope in humanity. Concurrently scheduled with course C147. S/U or letter grading.

249. Dance as Healing and Therapy. (4) Lecture, two hours; laboratory, two hours; outside study, research, eight hours. Designed for graduate students. Introduction to historical, theoretical, methodological, and ethical considerations involved in practice of dance as healing and therapy. Concurrently scheduled with course C148. Letter grading.

250. Critical Ethnographies. (5) Lecture, three hours. Enforced requisite: course 20 or 33. Survey of major tropes and rhetorical strategies to explain the cultural understanding. Examination of categorical no-
tions of insider and outsider while also developing various perspectives on performed acts of identity formation. Shown is the schedule with course C150. S/U or letter grading.

C251. Ethnography of Religions. (4) Lecture, three hours. Religions are cultural systems helping people to cope with misfortune, deal with death, and find fulfillment. Study reveals commonalities across cultures as cosmologies define moral being in world, divination determines causes of difficulty, spirit mediumship embodies divine intervention, and sacred arts render deities tangible. Nonjudgmental comparative investigation stressing conversation. Concurrently scheduled with course C151. S/U or letter grading.

C252. Visual Cultures. (4) Lecture, three hours. How are images of seeing constructed through culture, gender, religion, class, and nation? Theories and case studies from around world permit understanding of social processes through which gaze is determined and image economies negotiated. Topics include scopic regimes, aesthetics of streamlined design, and visibility and liberty. Concurrently scheduled with course C152. S/U or letter grading.

C255. Self and Culture. (4) Lecture, two hours; laboratory, one hour; supervised study, eight hours. Designed for graduate students. Examination of critical developmental processes and situational factors contributing to construction of sense of self and emergence of creativity and subjective relatedness in different cultural contexts. Concurrently scheduled with course C155. S/U or letter grading.

C256. 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 political, religious, and social history that gave rise to mestizaje and machismo, two social conditions that strongly influenced construction of her mestiza and gender identity, as well as her revolutionary political ideals, (2) obstacles that 20th-century female artists living in patriarchal societies had to confront, (3) way her self-portraits reflected her construction of subjective sense of self and kinds of artwork she produced, (4) transcendental and self-regulatory functions her self-portraits served in maintaining her emotional equilibrium, (5) conversion of Kahlo’s image after her death into cultural icon by culturally disenfranchised groups, and (6) psychosocial conditions and processes that tend to promote creation of cultural icons. Concurrently scheduled with course C156. S/U or letter grading.

C258. Theorizing Arts Activism. (4) Seminar, three hours. Historicizing and theorizing of arts activism to provide context for concerted analysis, creation, and protection. Includes theoretical texts and current performance histories. Consideration of one particular activist project, with focus on ongoing activism sponsored by UCLA Art and Global Health Center. Arts activist projects organized by seminar members supported and encouraged. Concurrently scheduled with course C158. S/U or letter grading.

C259. Art and Global Health. (4) Seminar, three hours. Exploration of interface of arts- and health-based methodologies in pursuit of improved health outcomes, using examples from international projects created and supported by UCLA Art and Global Health Center. Includes texts by artists and arts scholars and articles from public health and medical literature. Seminar members propose their own arts-based health promotion interventions. Concurrently scheduled with course C159. S/U or letter grading.

C264. Public Writing in Arts. (4) Lecture, four hours; outside study, eight hours. Survey of journalistic approaches to writing about arts, with eye toward shaping writing as public writing practices and writing that critique into practice. Exploration of new modes of (and venues for) writing that rebalance power differential between art makers and commentators. Concurrently scheduled with course C164. S/U or letter grading.

C268. Beyond Academia: Making Art in Real World. (4) Lecture, four hours; outside study, eight hours. Course focuses on using arts and culture for social change, and involves students in projects that move feedback on research being planned, conducted, or recently completed. Students required to complete a project such as a presentation each term they are enrolled for credit. May be repeated for maximum of 8 units. S/U grading.

C273. Sound Resources for Performance. (4) Lecture, three hours; studio, one hour; outside study, eight hours. Designed for graduate students. Exploration of life of renowned Mexican artist Frida Kahlo in light of (1) Mexico’s political, religious, and social history that gave rise to mestizaje and machismo, two social conditions that strongly influenced construction of her mestiza and gender identity, as well as her revolutionary political ideals, (2) obstacles that 20th-century female artists living in patriarchal societies had to confront, (3) way her self-portraits reflected her construction of subjective sense of self and kinds of artwork she produced, (4) transcendental and self-regulatory functions her self-portraits served in maintaining her emotional equilibrium, (5) conversion of Kahlo’s image after her death into cultural icon by culturally disenfranchised groups, and (6) psychosocial conditions and processes that tend to promote creation of cultural icons. Concurrently scheduled with course C156. S/U or letter grading.

C280. Video Production in Arts. (4) Lecture, one hour; laboratory, three hours. Fundamentals of video production: conceptualization, field recording (camera, lighting, sound, coverage), and editing (organizing raw video, constructing programs, mastering finished tape). Emphasizes alternative approaches to editing and choreography. May be repeated once for credit. Concurrently scheduled with course C180. Letter grading.


C283. Film and Folklore. (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 scheduled with course C183. S/U or letter grading.


C375. Teaching Apprentice Practicum. (1 to 4) Seminar, to be arranged. Preparation: apprentice personnel employment as teaching assistant, associate, or fellow. Teaching apprenticeship under active guidance and supervision of regular faculty member responsible for curriculum and instruction at UCLA. May be repeated for credit. S/U grading.

400. Directed Professional Activities. (2 to 8) Lecture, to be arranged. Directed projects in professional editing, bibliography, filmography, videography, conference and festival direction, and other professional activities. May not be applied toward M.A. degree requirements. May be repeated. S/U grading.

451. Teaching Assistant Seminar. (2 to 8) Seminar, one hour; laboratory, three hours. Required of all World Arts and Cultures Department teaching assistants. Lectures, discussion, readings, and practice teaching. May be repeated once for credit. S/U grading.

478. Advanced Private Instruction in World Arts and Cultures. (2 to 8) Studio, three to 12 hours; outside study, three to 12 hours. Private or supervised instruction with distinguished community-based artist to be arranged by students and approved by instructor. May be repeated for maximum of 24 units. S/U grading.

480. Seminar: Research Topics. (2 to 4) Seminar, three hours; outside study, three to nine hours. Focus in which faculty, students, and visitors make presentations and obtain feedback on research being planned, conducted, or recently completed. Students required to make minimum of one presentation each term they are enrolled for credit. May be repeated for maximum of 8 units. S/U grading.

495. Teacher Preparation in World Arts and Cultures. (2) Seminar, two hours. Directed work in preparation of course syllabi and discussion of topics relevant to developing teaching skills. Fundamental principles and methods with which to design course syllabi and gather resources for courses. Topics include development of teaching philosophy, evaluating/selected 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 course plans. Microteaching sessions provide context for applying concepts and principles discussed. S/U grading.

596A. Directed Individual Study or Research. (2 to 4) Tutorial, to be arranged. S/U grading.

596R. Directed Study or Research in Hospital or Clinic. (2 to 8) Tutorial, to be arranged. S/U grading.

599. Preparation for Master’s Comprehensive Examination or Ph.D. Qualifying Examination. (2 to 8) Tutoring, to be arranged. Preparation for M.A. or M.F.A. comprehensive examination or Ph.D. qualifying examination. S/U grading.


In the Undergraduate Study section of this catalog, (2) transfer students exempt on the basis of their transcript evaluation (see the Undergraduate Study section of this catalog), and (3) graduate students who hold a bachelor’s or higher degree from a university in which English is the medium of instruction (see International Applicants in the Graduate Study section of this catalog).

Based on the results of the AWPE or the ESLPE, students are either exempt from the ESL requirement or are required to take one or more courses in the ESL series. The required sequence for first-year undergraduate students is English as a Second Language 33B, 33C, and/or English Composition 2I. The required sequence for undergraduate transfer students is English as a Second Language 33B and/or 33G; each course must be completed with a grade of C or better (C– or a Passed grade is not acceptable). The required sequence for graduate students is English as a Second Language 33B and/or 33G; each course must be completed with a grade of C or better if taken for a letter grade, or S if taken on S/U basis (C– or an Unsatisfactory grade is not acceptable).

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 audience, ask and answer questions, participate appropriately in conversations with members of academic community, and improve through self-evaluation of speech. P/NP (undergraduates), S/U (graduates), or letter grading.

33A. Introductory English for Academic Purposes. (4) Lecture, 10 hours. Requisite: proficiency demonstrated on English as a Second Language Placement Examination. Displaces 8 units on student’s Study List but yields only 4 units of credit toward degree. Intensive instruction in structure of English, with focus on vocabulary building, listening and speaking skills, and basic composition techniques. To satisfy English as a Second Language requirement, students must select letter grading. P/NP (undergraduates), S/U (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), S/U (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), S/U (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 development of academic skills necessary for success in graduate school: (1) reading skills such as reading research in academic disciplines, rate and comprehension, and vocabulary development, (2) writing skills such as summarization and critique, and other discipline-specific assignments, academic listening skills, and (3) academic speaking skills such as participation in discussions and making presentations. Grammar incorporated as needed, especially in regard to writing. P/NP or letter grading.

34. Public Speaking for Academic Purposes. (4) Lecture, four hours. 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, give lectures or speeches before audience, respond to questions posed by audience, and improve through self-evaluation of speech. P/NP (undergraduates), S/U (graduates), or letter grading.

35. Approaches to University Writing for ESL Students. (4) Lecture, one hour. Designed to help nonnative speakers of English improve their academic writing skills. English is the medium of instruction. Emphasis on discipline-specific assignments, academic listening skills, and oral skills. Satisfies Writing II requirement. Letter grading.

36. Composition, Rhetoric, and Language for ESL Students. (3) 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 process, grammatical structures, and style. Satisfies Writing I requirement. Letter grading.

37. English Grammar and Style for Academic Purposes. (4) Lecture, one hour. Recommended for individuals whose Test of English as a Second Language (TOEFL) score is below 20. Recommended for international graduate assistants. P/NP (undergraduates), S/U (graduates), or letter grading.


38B. Pronunciation: Sound System of English. (4) Lecture, four hours. Designed to help nonnative speakers of English communicate effectively in social as well as classroom/academic settings and improve critical listening skills. Special focus on three important aspects of pronunciation: stress, rhythm, and intonation. P/NP (undergraduates), S/U (graduates), or letter grading.

39A. Intensive Language and Fluency Training for International Teaching Assistants. (4) Lecture, six hours. Recommended for individuals whose Test of Spoken English (TSE) score is 40 or below or whose UCLA Test of Oral Proficiency (TOP) score is 6.3 or below. Designed to aid international graduate students who wish to become teaching assistants, with focus on development of general communicative competence, fluency in classroom discourse, and improvement of accuracy of pronunciation and spoken grammar. Use of specialized instructional software in computer laboratory. P/NP (undergraduates), S/U (graduates), or letter grading.
English Composition

Lower Division Courses

A. Introduction to University Discourse. (No credit) Lecture, five hours. Enforced requisite: appropriate score on Analytical Writing Placement Examination. Displaces 4 units on student's Student's Study List but yields no credit toward degree. First course in reading university-level discourse, with analysis and critique of university-level texts. Emphasis varies according to topics covered. P/NP (undergraduates), S/U (graduates), or letter grading.

101. Introduction to Language Learning and Language Teaching. (4) Lecture, four hours. Requisite: ENGLISH 101. Introduction to the field of second language teaching with focus on pedagogical strategies and leading/participating in discussions. Emphasis on self, peer, and instructor feedback. Letter grade.


103. Presentation and Discussion-Leading Skills for International Teaching Assistants. (4) Lecture, four hours. Recommended for individuals whose Test of Spoken English (TSE) score is 45 or above or whose UCLA Test of Oral Proficiency (TOP) score is 7.0 or above. Designed to help nonnative speakers of English communicate effectively as teaching assistants. Activities include interactive teaching demonstrations and leading/participating in discussions. Emphasis on self, peer, and instructor feedback. Letter grade.

104. Literature, Culture, and Discourse. (5) Lecture, four hours. Enforced requisite: course 2 or English as a Second Language 35. Designed to help nonnative speakers of English communicate effectively as teaching assistants. Activities include interactive teaching demonstrations and leading/participating in discussions. Emphasis on self, peer, and instructor feedback. Letter grade.

105. Academic Reading and Vocabulary. (5) Lecture, three hours. Enforced requisite: satisfaction of Entry-Level Writing requirement, course 2 or English as a Second Language 35. Designed to help students admitted to one UC campus who have not completed their first year of college coursework. Introduction to demands of university writing and often unstated conventions that govern it. Writing techniques developed to address specific writing tasks such as timed examinations, effective as teaching assistants. Activities include interactive teaching demonstrations and leading/participating in discussions. Emphasis on self, peer, and instructor feedback. Letter grade.

106. Advanced Composition for ESL Students. (4) Lecture, four hours. Requisite: course 36 (C or better) or proficiency demonstrated on English as a Second Language Placement Examination. Specialized topics in second and foreign languages. Letter grade.

107. Academic Reading and Vocabulary. (4) Lecture, three hours. Enforced requisite: course 33C or 35 (may be taken concurrently) or proficiency demonstrated on English as a Second Language Placement Examination. Specialized topics in second and foreign languages. Letter grade.

108. Academic Reading and Vocabulary. (4) Lecture, three hours. Enforced requisite: course 33C or 35 (may be taken concurrently) or proficiency demonstrated on English as a Second Language Placement Examination. Specialized topics in second and foreign languages. Letter grade.

109. Literature and Language. (4) Lecture, four hours. Requisite: course 33C or 35 (may be taken concurrently) or proficiency demonstrated on English as a Second Language Placement Examination. Selections from English and American literature presented so as to make full allowance for students' linguistic and cultural problems and to contribute to increasing command of English language. P/NP (undergraduates), S/U (graduates), or letter grading.

197. Variable Topics in English as a Second Language. (4) Lecture, four hours. Specialized topics in English as a Second Language Placement Examination. Enforced requisite: course 33C or 35 (may be taken concurrently) or proficiency demonstrated on English as a Second Language Placement Examination. Specialized topics in second and foreign languages. Letter grade.

97A. Variable Topics in English as a Second Language. (4) Lecture, four hours. Specialized topics in English as a Second Language Placement Examination. Enforced requisite: course 33C or 35 (may be taken concurrently) or proficiency demonstrated on English as a Second Language Placement Examination. Specialized topics in second and foreign languages. Letter grade.

97B. Variable Topics in Academic Communication Skills for International Freshmen. (2) Lecture, two hours. Enforced requisite: English for academic purposes. Letter grade.

50. Writing Workshop. (2) Lecture, two hours. Enforced requisite: course 2 or English as a Second Language 35. Designed to provide feedback to students on their writing. Minimum of 15 to 20 pages of revised writing required. Satisfies Writing II requirement. Letter grade.

51. Writing Workshop. (2) Lecture, two hours. Limited to students admitted to one UC campus who have not completed their first year of college coursework. Introduction to demands of university writing and often unstated conventions that govern it. Designed to help students admitted to one UC campus who have not completed their first year of college coursework. Introduction to demands of university writing and often unstated conventions that govern it. Letter grade.
velopment of writing expertise in common discursive forms, stylistic patterns, and research practices in given discipline. Each course may be taken independently for credit. P/NP or letter grading. 129A. Literature; 129B. Social Sciences. Lecture, three hours; discussion, one hour; 129C. Physical and Life Sciences; 129D. Fine Arts.


131A-131D. Specialized Writing. (4 each) Lecture, four hours; discussion, one hour. Requisite: satisfaction of Entry-Level Writing and English Composition requirements. Designed for juniors/seniors. Advanced writing course designed to help students develop stylistic, formal, and argumentative sophistication in various rhetorical contexts, including different sections that emphasize rhetorical values of major professions and research areas. Each course may be taken independently for credit. P/NP or letter grading. 131A. Law and Politics; 131B. Business and Social Policy; 131C. Medicine and Public Health; 131D. Media and Communications.

132A-132D. Topics in Rhetoric and Writing. (4 each) Lecture, four hours; discussion, one hour. Requisite: satisfaction of Entry-Level Writing and English Composition requirements. Designed for juniors/seniors. Study of specific topics in relationship between rhetorical/writing and social or political history. Each course may be taken independently for credit. P/NP or letter grading. 132A. Gender and Writing; 132B. Autobiographical Writing; 132C. Cultural Studies; 132D. Variable Topic.

136A-136B-136C. Practical Writing and Editing. (4-4-4) Lecture, three hours. Preparation: one course from 131 series. Requisite: satisfaction of Entry-Level Writing requirement, course 3. Sequence in practical writing and editing ability specifically designed to prepare students for careers. Analysis of prose and literary styles necessary to variety of writing in professional, nonacademic fields combined whenever possible with practical experience in variety of writing assignments and training in wide range of editorial skills. In Progress (136A) and P/NP or letter (136B, 136C) grading.

175. Apprenticeship in Composition Tutoring. (2) Seminar, two hours. Enforced requisite: satisfaction of Writing II requirement. Composition Peer Learning Facilitators (PLFs) who work in Undergraduate Writing Center provided with ongoing mentoring in composition and peer learning methodologies. Overview of language, writing, and literacy needs of diverse college-age writers, including developing writers, multilingual writers, and nonnative English-speaking (NNS) writers. Provides opportunity to reflect critically on theoretical and practical frameworks for tutoring to which students have been introduced. PLFs receive guidance in their tutoring process via observations by course instructor and their peers. P/NP or letter 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.

M495E. Supervised Teaching Preparation. (2) (Same as Engineering M495E) Seminar, two hours. Required of all teaching assistants for English as a second language (ESL) multiskills and composition courses. Focus on pedagogical issues specifically related to academic reading and composition skills for ESL students, including course design, assessment of student writing, conferencing, and specialized problems that may occur in teaching English Composition. S/U grading.

M495F. 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.
Appendixes

APPENDIX A: REGULATIONS AND POLICIES

Nondiscrimination
The University of California, in accordance with applicable Federal and State Laws and University Policies, does not discriminate on the basis of race, color, national origin, religion, sex, gender identity, pregnancy (including 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) 206-6985.

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 the ADA and 504 Compliance Officer, A239 Murphy Hall, UCLA, BOX 951405, Los Angeles, CA 90095-1405, voice (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 grounds 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, and/or refer to the UCLA Campus Counsel, 3149 Murphy Hall or at http://www.ucla.edu/legal_affairs/ucpolicies/aos/toc.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.uccp.ucop.edu/ucophome/coordrev/ucpolicies/aos/toc.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 (as defined in Section 160.00 et seq. of the University of California Policies Applying to Campus Activities, Organizations, and Students)

d. 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

In determining whether or not to exercise off-campus jurisdiction in cases under alternative A.1 above, the University will consider the seriousness of the alleged misconduct; whether the alleged victim is a member of the campus community; the ability of the University to gather information, including the testimony of witnesses; or whether the off-campus conduct is part of a series of actions that occurred both on and off campus.

This section is intended only to provide guidance for the exercise of discretion by the University in invoking its jurisdiction over conduct that occurs off campus. It may not be relied upon by any student charged under this section to create any rights, substantive or procedural, or as a basis for a challenge to the exercise of the University’s jurisdiction.

B. Types of Misconduct
Students may be disciplined for violations or attempted violations (including aiding, abetting, facilitating, or participating in the planning of an act that would be in violation of the UCLA Student Conduct Code, whether or not the individual who carries out that act is a student). Violations include the following types of misconduct:

102.01: Academic Dishonesty. All forms of academic misconduct, including but not limited to cheating, fabrication or falsification, plagiarism, multiple submissions, or facilitating academic misconduct. For the purposes of the UCLA Student Conduct Code, the following definitions apply:

102.01a: Cheating. Cheating includes, but is not limited to, the use of unauthorized materials, information, or study aids in any academic exercise; the alteration of any answers on a graded document before submitting it for regrading; or the failure to observe the expressed procedures or instructions of an academic exercise (e.g., examination instructions regarding alternate seating or conversation during an examination).

102.01b: Fabrication. Fabrication includes, but is not limited to, falsification or invention of any information or citation in an academic exercise, including fabrication or falsification of research.

102.01c: Plagiarism. Plagiarism includes, but is not limited to, the use of another person’s work (including words, ideas, designs, or data), without giving appropriate attribution or citation. This includes, but is not limited to, representing, with or without the intent to de-
receives, part or all of an entire work obtained by purchase or otherwise, as the student’s original work; the omission of or failure to acknowledge the true source of the work; or representing an altered but identifiable work of another person or the student’s own previous work as if it were the student’s original or new work.

Unless otherwise specified by the faculty member, all submissions, whether in draft or final form, to meet course requirements (including a paper, project, take-home examination, computer program, oral presentation, or other work) must either be the student’s own work, or must clearly acknowledge the source.

102.01d: Multiple Submissions. Multiple submissions 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 Evaluation of Coursework. Threatening personal or professional repercussions or discipline against an instructor to coerce the instructor to change a grade or otherwise evaluate the student’s work by criteria not directly related to the student's work, or otherwise preventing the student's participation in or evaluation of the course, without the permission/consent of the instructors of both courses.

102.02: Other Forms of Dishonesty. Other forms of dishonesty, including but not limited to fabricating information or knowingly furnish- ing 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, Damage, or Destruction of Property.

102.04a: Theft. Theft includes taking without expressed permission or, misappropriation of any property of the University or property of others while on University premises or at official University functions; or possession of any property that the student had knowledge or reasonably should have had knowledge was stolen.

102.04b: Damage or Destruction of Property. Damage or destruction of any University property or the property of others while on University premises or at official University functions.

102.05: Computer Misuse. Theft or abuse of University computers and other University electronic resources such as computer and electronic communications facilities, systems, and services. Abuses include, but are not limited to, unauthorized entry, use, transfer, or tampering with the communications of others; 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.adminpolicies.ucla.edu/app/Default.aspx?id=455), of the University of California Electronic Communications Policy (available at http://www.ucop.edu/ucophome/policies/ecc/), or of any other University acceptable or allowable use policy is also considered a violation of Section 102.05.

102.06: Unauthorized Use of University Resources or Name. Unauthorized entry to, possession of, receipt of, or use of any University services, equipment, resources, or properties, including the University’s name, insignia, or seal.

102.07: Violations of University Policy. Students may be subject to discipline for violation of any University policy.

102.07a: University Housing. Violations of policy regarding University-owned, -operated, or -leased housing facilities or other housing facilities located on University property.

102.07b: University Parking. Violations of policy regarding University parking services or University-owned or -operated parking facilities.

102.07c: University Recreation. Violations of policy regarding University recreation services, programs, or within University-owned or -operated recreation facilities.

102.07d: University Identification Card (BruinCard). Violation of policies, regulations, or rules governing use of official University identification cards, including manufacturing or possession of false identification cards, using another person’s BruinCard to obtain services or establish identity, facilitating the misuse of one’s BruinCard by another person to obtain services or establish identity, or other misuse of the BruinCard.

102.08: Conduct that Threatens Health or Safety. Conduct that threatens the health or safety of any person, including oneself. This includes, but is not limited to, physical assault, sexual 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 intimidation 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 intimidation, 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: Sexual Harassment.

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 for employees (http://www.ucop.edu/ucophome/coodrev/pol icy/PPP021006Policy.pdf). Otherwise, the applicable standard for sexual harassment by students is conduct that is so severe and/or pervasive, and objectively offensive, in that so substantially impairs a person’s access to University programs or activities that the person is effectively denied equal access to the University’s resources and opportunities.

In compliance with UCLA Procedure 630.1, cases involving allegations of sexual harassment must be either resolved by the dean or heard before the Student Conduct Committee within 60 days of the referral of the complaint. This deadline may be extended on approval from the vice chancellor of Student Affairs.

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: Harassment. Harassment is defined as conduct that is so severe and/or pervasive, and objectively offensive, and that so substantially impairs a person's access to University programs or activities that the person is effectively denied equal access to the University's resources and opportunities.

Student and/or employee sexual harassment is governed by the University of California Policy on Sexual Harassment and the procedures for responding to sexual harassment. See Section 102.09.

Sanctions may be enhanced where an individual was selected for harassment because of the individual's race, color, national or ethnic origin, citizenship, sex, religion, age, sexual orientation, gender identity, pregnancy, marital status, ancestry, service in the uniformed services, physical or mental disability, medical condition, or perceived membership in any of these classifications.

102.12: Hazing. Participating in, engaging in, or supporting hazing or any method of initiation or preinitiation into a campus organization or other activity engaged in by the organization or members of the organization at any time that causes, or is likely to cause, physical injury or personal degradation or disgrace resulting in psychological harm to any student or other person.

102.13: Obstruction or Disruption. Obstruction or disruption of teaching, research, administration, disciplinary procedures, or other University activities.

102.14: Disorderly Behavior. Engaging in disorderly or lewd conduct.

102.15: Disturbing the Peace. Participation in a disturbance of the peace or unlawful 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. Manufacture, distribution, dispensing, possession, use, or sale of, or the attempted manufacture, distribution, dispensing, or sale of controlled substances (including medicinal marijuana), identified in Federal and State laws or regulations, which is unlawful or otherwise prohibited by, or not in compliance with, any University policy or campus regulations or being unable to exercise care for one's own safety because one is under the influence of controlled substances. NOTE: This provision shall not apply to circumstances wherein the person under the influence was given a controlled substance without her or his knowledge and permission.

102.18: Alcohol. Manufacture, distribution, dispensing, possession, use, or sale of, or the attempted manufacture, distribution, dispensing, or sale of alcohol which is unlawful or otherwise prohibited by, or not in compliance with, University policy or campus regulations, or being unable to exercise care for one's own safety because one is under the influence of alcohol. NOTE: This provision shall not apply to circumstances wherein the person under the influence was given alcohol without her or his knowledge and permission.

102.19: Destructive Devices. Possession, use, storage, or manufacture of explosives, firebombs, or other destructive devices.

102.20: Weapons and Replica Weapons.

102.20a: Weapons. Except as expressly permitted by law, possession, use, storage, or manufacture of a firearm or other weapon capable of causing bodily injury is prohibited.

102.20b: Replica Weapons. Except as expressly permitted by UCPD policy, possession, use, storage, or manufacture of replicas of firearms or other weapons is prohibited.

102.21: Violation of Disciplinary Conditions. Violation of the conditions contained in the terms of a disciplinary action imposed under the UCLA Student Conduct Code.

102.22: Violation of Interim or Emergency Suspension Conditions. Violation of the conditions contained in a written Notice of Interim or Emergency Suspension issued pursuant to Section IV of the UCLA Student Conduct Code.

102.23: Unauthorized Use or Sale of University Materials. Except as provided herein, no student shall give, sell, or otherwise distribute to others or publish any recording made during any course presentation without the written consent of the University and the instructor/presenter. This policy is applicable to any recording in any medium, including handwritten or typed notes.

Any distribution of a recording of a course presentation at UCLA that captures the actual sounds and/or images of that course presentation, in any medium, must consider not only the rights of the instructor and the University, but also those of other parties. Examples include the privacy rights of students enrolled in the course, the rights of guest lecturers, and the copyright interests in materials authored by others that are displayed or presented during the course presentation. In addition to the consent of the University and the instructor/presenter, it may be necessary to secure permission from these other parties before any recording, distribution, publication, or communication is legally permitted.

102.23a: Selling Academic Materials. Selling, preparing, or distributing for any commercial purpose academic materials, including but not limited to written, video, or audio recordings of any course unless authorized by the University in advance and explicitly permitted by the course instructor in writing. The unauthorized sale or commercial distribution of academic materials, including but not limited to recordings, by a student is a violation of the UCLA Student Conduct Code whether or not it was the student or someone else who prepared the notes or recordings. This policy is applicable to any recording in any medium, including handwritten or typed notes.

102.23b: Copying Course Notes. Copying for any commercial purpose handouts, readers, or other course materials provided by an instructor as part of a University of California course unless authorized by the University in advance and explicitly permitted by the course instructor or the copyright holder in writing (if the instructor is not the copyright holder). Students currently enrolled in a course may provide a copy of their own notes or recordings to other currently enrolled students for noncommercial purposes reasonably arising from participation in the course, including individual or group study.

102.23c: Commencement Tickets. Selling commencement tickets.

102.24: Misure of University Property. Organizing or carrying out unlawful activity on University property.

102.25: Violations of Law. Students may be subject to discipline on the basis of a conviction under any federal, California state, or local criminal law, when the conviction constitutes reasonable cause to believe that the student poses a threat to the health or safety of any person, or to the security of any property, on University premises or at official University functions, or to the orderly operation of the campus.

102.26: Terrorizing Conduct. Conduct, where the actor means to communicate a serious expression of intent to terrorize, or acts in reckless disregard of the risk of terrorizing, one or more University students, faculty, or staff. Terrorizing means to cause a reasonable person to fear bodily harm or death, perpetrated by the actor or those acting under his/her control. Reckless disregard means consciously disregarding a substantial risk. This section applies without regard to whether the conduct is motivated by race, ethnicity, personal animosity, or other reasons. This section does not apply to conduct that constitutes the lawful defense of oneself, of another, or of property.

102.27: Unwanted Personal Contact. Contact (whether physical, verbal, written, face-to-face, telephonic, electronic, or by other means) that (1) a student knows or should know is unwanted, (2) is communicated directly to one or more specific students, faculty, or staff, (3) constitutes severe and/or pervasive, and objectively offensive, conduct, and (4) does not constitute speech protected by the First Amendment to the U.S. Constitution (e.g., speech in a public forum on a matter of public concern).

102.28: Expectation of Privacy. The following is prohibited:
Making a video recording, audio recording, taking photographs, or streaming audio/video of any person in a private location without that person’s knowledge and express consent.

Looking through a hole or opening, into, or otherwise viewing, by means of any instrumentality, the interior of a private location without the subject’s knowledge and express consent.

Photographs and recordings made in private locations of sexual activity or that contain nudity may not be posted online or otherwise shared or distributed in any manner without the knowledge and express consent of all recorded parties, even if the photograph or recording was originally made with the knowledge and express consent of those parties.

Nudity means the absence of an opaque covering which covers the genitals, pubic hair, buttocks, perineum, anus, or anal region of any person or any portion of the breast at or below the areola thereof of any female person. Private locations are settings where the person reasonably expected privacy. For example, in most cases the following are considered private locations: residential living quarters, bathrooms, locker rooms, and personal offices. Private, nonpublic conversations and/or meetings include any communication carried on in circumstances that reasonably indicate that any party wants the communication to be confined to the parties, but excludes a communication made in a public gathering, or in any other circumstance in which the parties to the communication may reasonably expect that the communication may be overheard or recorded. Express consent is clear, unmistakable, and voluntary consent that may be in written, oral, or nonverbal form.

These provisions do not extend to public events or discussions, nor to lawful official law or policy enforcement activities. These provisions may not be utilized to impinge on the lawful exercise of constitutionally protected rights of freedom of speech or assembly.

Sexual Assault and 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. Chancellor’s Office, Sexual Harassment Coordinator, 2241 Murphy Hall, (310) 206-3417

4. Counseling and Psychological Services, Director, 221 Wooden Center West, (310) 825-0768

5. David Geffen School of Medicine, Dean’s Office, Special Projects Director, 12-138 Center for the Health Sciences, (310) 794-1958

6. Graduate Division, Office Manager, 1237 Murphy Hall, (310) 206-3269

7. Healthcare Human Resources, Employee Relations Manager, 400 UCLA Wilshire Center, (310) 794-0500

8. Lesbian Gay Bisexual Transgender Campus Resource Center, Director, B36 Student Activities Center, (310) 206-3628

9. Office of the Dean of Students, Assistant Dean of Students, 1206 Murphy Hall, (310) 825-3871

10. Office of Ombuds Services, 105 Strathmore Building, (310) 825-7627; 52-025 Center for the Health Sciences, (310) 206-2427

11. Office of Residential Life, Judicial Affairs Coordinator, 205 Bradley Hall, (310) 825-3401

12. Resnick Neuropsychiatric Hospital, Administration/Human Resources Associate Director, B7-370 Semel Institute, (310) 206-5258

13. School of Dentistry, Assistant Dean, Student Affairs, A0-111 Dentistry, (310) 825-2615

14. Student Legal Services, Director, A239 Murphy Hall, (310) 825-9894

15. 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
Applying to Campus Activities, Organizations, longer express an idea, but rather injure and words can be used in such a way that they no
the University is committed to the free exchange 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 University community. The University of California Policies and Procedures, revised 1987
the relationship between professor and student. They acknowledge significant academic and scholarly assistance from them. They protect their academic freedom.” (from 1966 AAUP statement, revised 1987)


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 complaining person 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://senate.universityofcalifornia.edu/manual/apm015.pdf). Part II A 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.

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 durational 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 two tax years immediately preceding the term for which they are requesting resident classification, and they can demonstrate self-sufficiency for two full years prior to the residence determination date of the term they propose to attend the University through their own resources (such as employment, commercial loans, financial aid, and savings that can be officially documented). The two years required for self-support might not coincide with the two tax years during which they must not have been claimed by their parents.

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 residence can also serve as an indication of their intent. Documentary evidence is required, and all relevant indications are considered in determining the classification. Intent is questioned if students return to their prior state of residence when the University is not in session.

General Rules Applying to Minors

If students are unmarried minors (under age 18), the residence of the parent with whom they live is considered to be their residence. If they have a parent living, they cannot change their residence by their own act, by the appointment of a legal guardian, or by the relinquishment of their parent’s right of control. If students live with neither parent, their residence is that of the parent with whom they last lived. Unless they are minor aliens present in the U.S. under the terms of a nonimmigrant visa that precludes them from establishing a domicile in the U.S., students may establish their own residence when both their parents are deceased and a legal guardian has not been appointed. If they derive California 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

A minor or 18-year-old student may be entitled to resident classification if, immediately prior to enrolling in a postsecondary institution, they have been living with and been under the continuous direct care and control of an adult or adults other than a parent for a period of no less than two years. The adult or adults having control must have been residents of California during the one year immediately prior to the residence determination date. The classification continues until students have attained the age of 19 and have lived in the state the minimum time necessary to become a resident, so long as continuous full-time attendance is maintained at a postsecondary institution.

Self-Support

If students are U.S. citizens or eligible aliens and are minors who can prove that they lived in California for the entire year immediately before the residence determination date, that they have been self-supporting for that year, and that they intend to make California their permanent home, they may be eligible for resident status.

Exemptions from Nonresident Supplemental Tuition

Member of the 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 not for educational purposes. The letter must include the dates of their assignment to the state.

Undergraduate students discharged from military service after having been stationed in California on active duty for at least 366 days are entitled to resident classification for the minimum time necessary to establish residence (366 days). In this case, financial independence is not a requirement.
Some members of the U.S. 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.

Spouse, Registered Domestic Partner, or Other Dependents of Military Personnel
Students are exempt from payment of nonresident supplemental tuition if they are a spouse, registered domestic partner, or natural or adopted child or stepchild who is a dependent of a member of the U.S. 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 and 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 athlete 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.

Recipients of the Congressional Medal of Honor and Their Children under Age 28
Undergraduate students who are recipients of the Congressional Medal of Honor or who are the children of a recipient may be exempt from nonresident supplemental tuition. Recipients must be California residents, and students must be under age 28. Students’ annual income must not exceed the national poverty level. If the recipient was a parent who died, the parent must have been a California resident at the time of death.

Dependents or Wards of State through California’s Child Welfare System
Notwithstanding any other provisions, students who reside in California and are 19 years of age or under at the time of enrollment, and who are currently dependents or wards of the state through California’s Child Welfare System, or were served by California’s Child Welfare System and are no longer being served either due to emancipation or aging out of the system, shall be entitled to a resident classification as long as they remain continuously enrolled.

Temporary Absences
If persons are nonresident students who are in the process of establishing a residence for tuition purposes and they return to their former home during noninstructional periods, their presence in the state is presumed to be solely for educational purposes and only convincing evidence to the contrary rebuts this presumption. Students who are in the state solely for educational purposes are NOT classified as residents for tuition purposes regardless of the length of their stay.

If persons are students who have been classified as residents for tuition purposes and they leave the state temporarily, their absence could result in the loss of their California residency. The burden is on students (or their parents if they are minors) to verify that they did nothing inconsistent with their claim of a continuing California residence during their absence. Steps that students (or their parents) should take to retain a California residence include the following:

1. Continue to use a California permanent address in all records—educational, employment, military, etc.
2. Continue to satisfy California tax obligations. If students are claiming California residence, they are liable for payment of income taxes on their total income from the date they establish their residence in the state, including income earned in another state or country.
3. Retain a California voter’s registration and vote by absentee ballot.
4. Maintain a California driver’s license and vehicle registration. If it is necessary to change the driver’s license or vehicle registration, students must change them back within the time prescribed by law.

Petition for Residence Classification
Students may obtain a petition at 1113 Murphy Hall or at http://www.registrar.ucla.edu/forms/residenceclass.pdf for a change of clas-
allification 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.

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 students as nonresidents for purposes of tuition was based on (a) a significant error of fact, (b) a significant procedural error, or (c) an incorrect application of policy that, if corrected, would require that the students be reclassified as residents.

2. Significant new information became available after the date of the campus decision classifying the students as nonresidents; despite the exercise of reasonable diligence (care and attention) the information was not previously known or available to the students; and, based on the new information classification as nonresidents is incorrect.

No appeals based solely on disagreement with the campus decision are acceptable.

**Appeal Deadline**

The Office of the General Counsel must receive the appeal from students within 30 days of the date of the campus decision notifying students of the nonresident classification. Appeals should be directed to Residency Analyst, UC Office of the General Counsel, 1111 Franklin Street, 8th Floor, Oakland, CA 94607-5200. NO OTHER UNIVERSITY PERSONNEL ARE AUTHORIZED TO SUPPLY INFORMATION RELATIVE TO RESIDENCE REQUIREMENTS FOR TUITION PURPOSES.

**Privacy Notice**

All of the information requested on the Statement of Legal Residence form is required (by the authority of Standing Order 110.2 (a)-(d) of The Regents of the University of California) for determining whether or not students are legal residents for tuition purposes. Registration cannot be processed without this information. The Registrar’s Office on campus maintains the requested information. Students have the right to inspect University records containing the residence information requested on the form.

**Financial Aid Standards for Satisfactory Academic Progress**

The UCLA Financial Aid Office establishes Standards for Satisfactory Academic Progress to measure students’ progress toward degree completion using both qualitative and quantitative methods in accordance with federal regulations. To be eligible for financial aid, students must meet or exceed these standards. Failure to maintain these standards may result in suspension of financial aid eligibility. The standards are as strict or more strict than the UCLA standards for a student enrolled in the same educational program who is not receiving Title IV assistance. See the Standards for Satisfactory Academic Progress Guide 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 Academic Major/ Pursuit of Double Major or Minor**

Students who have a change of academic major or pursue a double major or minor do not have additional financial aid eligibility beyond the maximum timeframe established in this policy.

**Successful Completion of Units**

To successfully complete units, students must receive a grade of A, B, C, D, or P (S for graduate students) in each course. Grades of F, I, NP (U for graduate students), NR (No Report), and DR (Deferred Report) do not count as successful completion of coursework attempted.

The Standards for Satisfactory Academic Progress apply to all coursework attempted, including coursework for which students did not receive financial aid.

**Cancellations**

Cancellation of registration on or before the first day of classes does not count as units attempted.

**English as a Second Language, 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 Winter Quarter grades are available. For students on probation and for students who are required to follow an academic plan (see below), academic progress is evaluated each term.

**Suspension**

Students who fail to meet the Standards for Satisfactory Academic Progress are placed on suspension and are no longer eligible to receive financial aid. 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.
The final grade in the course is based on the course committee. Student performance are based on the course in the course. The standards for evaluating plausible for determining the grade of each student. Assigning a Grade

Grading Regulations by the respective school. Students attending the Schools of Dentistry, may result in suspension of their financial aid caused delays in their aid being disbursed and stored. Failure to adhere to their academic plan are evaluated each term. Their adhering to their academic plan. Students on an plan as a condition of their approved 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 an 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 by 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 Strathmore 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 pri-
Privacy. Otherwise, the instructor shall retain final examination materials, or a copy thereof, until the end of the next succeeding regular term of instruction, during which period students shall have access to their examinations.

Disclosure of Student Records

Pursuant to the Federal Family Educational Rights and Privacy Act (FERPA), the California Information Practices Act, and the University of California Policies Applying to the Disclosure of Information from Student Records, students at UCLA have the right to (1) inspect and review records pertaining to themselves in their capacity as students, except as the right may be waived or qualified under Federal and State Laws and University Policies, (2) have withheld from disclosure, absent their prior written consent for release, personally identifiable information from their student records, except as provided by Federal and State Laws and University Policies, (3) inspect records maintained by UCLA of disclosures of personally identifiable information from their student records, (4) seek correction of their student records through a request to amend the records or, if such request is denied, through a hearing, and (5) file complaints with the U.S. Department of Education regarding alleged violations of the rights accorded them by FERPA.

UCLA, in accordance with Federal and State Laws and University Policies, has designated the following categories of personally identifiable information as “public information” that UCLA may release and publish without the student’s prior consent: name, address (local/mailing, permanent, and/or e-mail), telephone numbers, major field of study, dates of attendance, enrollment status, grade level, number of course units in which enrolled, degrees and honors received, the most recent previous educational institution attended, participation in officially recognized activities (including intercollegiate athletics), and the name, weight, and height of participants on intercollegiate athletic teams.

As a matter of practice, UCLA does not publish student addresses or telephone numbers in the campus electronic directory unless released by the student. The term “public information” in this policy is synonymous with the term “directory information” in FERPA.

Students who do not wish certain items (i.e., name, local/mailing, permanent, and/or e-mail address, telephone numbers, major field of study, dates of attendance, number of course units in which enrolled, and degrees and honors received) of this “public information” released and published may so indicate through URSA (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 Request Form available from the Registrar’s Office, 1113 Murphy Hall.

Student records that are the subject of Federal and State Laws and University Policies may be maintained in a variety of offices, including the Registrar’s Office, Office of 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 online UCLA Campus 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 print UCLA Telephone Directory may be inspected in the office of the Information Practices Coordinator, 500 UCLA Wilshire Center. Information concerning students’ hearing rights may be obtained from that office and from the Office of the Dean of Students, 1206 Murphy Hall.

Undergraduate Retention, Graduation, and Time to Degree

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

Recent four-year, five-year, and six-year graduation rates for students entering from high school have averaged 71, 88, and 90 percent respectively. Over 91 percent of all entering freshmen eventually graduate from UCLA.

Recent two-year, three-year, and four-year graduation rates for entering transfer students have averaged 60, 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 2011-12 more than 4,400 baccalaureate degrees were awarded to students who entered directly from high school. Among these graduates, 80 percent were registered for 12 quarters or less (i.e., four years or less), 89 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 2011-12 more than 3,000 baccalaureate degrees were awarded to students who entered as transfers. Among these graduates, 70 percent were registered for six quarters or less (i.e., two years or less), 79 percent for seven quarters or less, 86 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.

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 Unit handles criminal investigations, and detectives conduct interviews, arrest violators, execute search warrants, and file cases with the Los Angeles District and City Attorney Offices.

Incident Reporting

UCLA police officers have primary jurisdiction over the UCLA campus, 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 campus, the Center for the Health Sciences, and other UCLA properties should be reported immediately to the police department to ensure appropriate action is taken. Crimes occurring off campus should be reported immediately to the local law enforcement agency. UCPD does take reports from students, faculty, and staff for incidents occurring in the Westwood area.

Police, fire, or medical EMERGENCIES can be reported by 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.

NONEMERGENCY calls for service can be made by contacting the department at (310) 825-1491. Campus community members are encouraged to program the department number into their cell phones and report on suspicious circumstances.
Crime Statistics and Reports

As required by the Jeanne Clery Disclosure of Campus Security Policy and Campus Crime Statistics Act, 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/1000858.

Community Service Officers

UCPD employs approximately 80 student community service officers (CSOs; http://map.ais.ucla.edu/go/1000050) 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. 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, sexual assault prevention, and active shooter situations. Other programs are developed to meet the special needs of the campus community. Brochures and literature on crime prevention and personal safety are available. Counseling and Psychological Services (CAPS) and the Crime Prevention Unit 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/campusSafety-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 responsibility 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 not 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 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://regents.universityofcalifornia.edu) appointed by the Governor expire March 1 of the year in parentheses. The Student Regent (Cinthia Flores) 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
Kenneth A. Finegold (2014)
Vice President of the Alumni Associations of the University of California
Van N. Schultz (2014)
President of the University
Mark G. Yudof

Appointed Regents
Richard C. Blum (2014)
William De La Peña (2018)
Russell S. Gould (2017)
Eddie Island (2017)
George D. Kieffer (2021)
Sherry L. Lansing (2022)
Hadi Makarechian (2020)
Norman J. Pattiz (2014)
Bonnie Reiss (2020)
Frederick R. Ruiz (2016)
Bruce D. Varner (2018)
Paul D. Wachter (2016)
Charlene Zettel (2021)
Cinthia Flores, Student Regent (2014)

Faculty Representatives to the Board of Regents
William Jacob
Edwina Barvosa

Staff Advisers to the Board of Regents
Kathy Barton (2012-14)
Donna Coyne (2013-15)

Officers of the Regents
President of The Regents
Edmund G. Brown, Jr.
Chair of The Regents
Bruce D. Varner
Vice Chair of The Regents
Frederick R. Ruiz
Chief Investment Officer and Acting Treasurer
Marie N. Berggren
General Counsel
Charles F. Robinson
Secretary and Chief of Staff
Marsha Kelman

Senior Vice President—Chief Compliance and Audit Officer
Sheryl Vaccara

Office of the President
President of the University
Mark G. Yudof
Provost and Executive Vice President—Academic Affairs
Aimée Doré
Executive Vice President—Business Operations
Nathan Brostrom
Executive Vice President—Chief Financial Officer
Peter J. Taylor
Senior Vice President—External Relations
Daniel M. Dooley
Senior Vice President—Health Sciences and Services
John D. Stobo
Vice President—Agriculture and Natural Resources
Barbara Allen-Diaz
Vice President—Budget and Capital Resources
Patrick J. Lenz
Vice President—Human Resources
Dwaine B. Duckett
Vice President—Investments
Marie N. Berggren
Vice President—Laboratory Management
Glenn L. Mara
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
Nicholas B. Dirks
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
Jane Close Conoley, Acting
Chancellor at San Diego
Pradeep K. Khosla
Chancellor at San Francisco
Susan Desmond-Hellmann
Chancellor at Santa Barbara
Henry T.Y. Yang
Chancellor at Santa Cruz
George W. Blumenthal

University Professors, UCLA
Robert B. Edgerton, University Professor
Emeritus, Los Angeles, Anthropology
Psychiatry and Biobehavioral Sciences
M. Frederick Hawthorne, University Professor
Emeritus, Los Angeles, Chemistry and Biochemistry

UCLA Administrative Officers
Chancellor
Gene D. Block, Ph.D.
Executive Vice Chancellor and Provost
Scott L. Waugh, Ph.D.
Administrative Vice Chancellor
Jack J. Powazek, Ed.D.
Vice Chancellor—Academic Personnel
Carole E. Goldberg, J.D.
Vice Chancellor and Chief Financial Officer
Steven A. Olsen, M.P.P.
Vice Chancellor—External Affairs
Rhea Turteltaub, B.A.
Vice Chancellor—Health Sciences
A. Eugene Washington, M.D.
Vice Chancellor—Legal Affairs
Kevin S. Reed, J.D.
Vice Chancellor—Research
James S. Economou, M.D., Ph.D.
Vice Chancellor—Student Affairs
Janina Montero, Ph.D.
Vice Provost—Faculty Diversity and Development
Christine A. Littleton, J.D.
Vice Provost—Graduate Education and Dean of Graduate Division
Robin L. Garrell, Ph.D.
Vice Provost—Information Technology
James F. Davis, Ph.D.
Vice Provost—Institute of American Cultures
M. Belinda Tucker, Ph.D.
Vice Provost—Interdisciplinary and Cross-Campus Affairs
Timothy F. Brewer, M.D.
Vice Provost—International Institute
C. Cindy Fan, Ph.D., Interim
Vice Provost—New Collaborative Initiatives
Kathryn Ann Atchison, D.D.S., M.P.H.
Vice Provost—Undergraduate Education
Patricia A. Turner, Ph.D.
University Librarian
Virginia Steel, M.A.
University Registrar
Frank Y. Wada, M.A.
Dean of Continuing Education and University Extension
Michelle Stiles, Ed.D., Interim

Deans of UCLA College and Schools
School of the Arts and Architecture
Christopher Waterman, Ph.D.
School of Dentistry
No-Hee Park, D.M.D., Ph.D.
Graduate School of Education and Information Studies
Marcelo M. Suárez-Orozco, Ph.D.
Henry Samueli School of Engineering and Applied Science
Vijay K. Dhir, Ph.D.
School of Law
Rachel F. Moran, J.D.
College of Letters and Science
Division of Humanities
David C. Schaberg, Ph.D.
Division of Life Sciences
Victoria L. Sork, Ph.D.
Division of Physical Sciences
Joseph A. Rudnick, Ph.D.
Division of Social Sciences
Alessandro Duranti, Ph.D.
Division of Undergraduate Education
Patricia A. Turner, Ph.D.

John E. Anderson Graduate School of Management
Judy D. Olian, Ph.D.

David Geffen School of Medicine
A. Eugene Washington, M.D.

School of Nursing
Courtney H. Lyder, N.D.

Meyer and Renee Luskin School of Public Affairs
Franklin D. Gilliam, Jr., Ph.D.

Jonathan and Karin Fielding School of Public Health
Judy Heymann, M.D., Ph.D.

School of Theater, Film, and Television
Teri E. Schwartz, M.A.

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," which support the educational and research activities of distinguished members of the faculty.

As this catalog goes to press, UCLA has 369 endowed chairs that have been approved by the Office of the President of the University of California, as follows. (Asterisks indicate new chairs that have been approved by the Office of the President since publication of the 2012-13 UCLA General Catalog.)

School of the Arts and Architecture
Susan G. Covel and Mitchel D. Covel, M.D., Chair in Music
Alma M. Hawkins Memorial Chair
Mickey Katz Endowed Chair in Jewish Music
S. Charles Lee Chair in Architecture and Urban Design
Harvey S. Perloff Chair
Presidential Chair in Music and Interactive Arts
Mohinder Brar Sambhi Endowed Chair in Indian Music
UCLA Art Council Professorship in Art

School of Dentistry
Dr. Thomas R. Bales Endowed Chair in Orthodontics
Dr. Thomas K. Barber Endowed Chair in Pediatric Dentistry
Nobel Biocare Endowed Chair in Surgical Implant Dentistry
Dr. No-Hee Park Chair in Dentistry
Tarrson Family Endowed Chair in Periodontics
Jack A. Weichman Chair in Endodontics
*Bob and Marion Wilson Endowed Chair in Pediatric Dentistry
Felix and Mildred Yip Endowed Professorship in Dentistry

Graduate School of Education and Information Studies
Martin and Bernard Breslauer Professorship in Bibliography

Allan Murray Carter Chair in Higher Education
George F. Kneller Chair in Education and Anthropology
George F. Kneller Chair in Education and Philosophy
MacArthur Foundation Chair in Digital Media and Learning
Presidential Chair in Education and Diversity
Presidential Chair in Information Studies

Henry Samueli School of Engineering and Applied Science
L.M.K. Boelter Chair in Engineering
*Traugott and Dorothea Frederking Endowed Chair in Cryogenics
Norman E. Friedmann Chair in Knowledge Sciences
Leonard Kleinrock Chair in Computer Science
Evaluyn Knight Chair in Engineering
Levi James Knight, Jr., Chair in Engineering
Richard G. Newman AECOM Endowed Chair in Civil Engineering
Nippon Sheet Glass Company Chair in Materials Science
Northrop Grumman Chair in Electrical Engineering
Northrop Grumman Chair in Electrical Engineering/Electromagnetics
Northrop Grumman Opto-Electronic Chair in Electrical Engineering
Ralph M. Parsons Foundation Chair in Chemical Engineering
Jonathan B. Postel Chair in Computer Systems
Jonathan B. Postel Chair in Networking
Raytheon Company Chair in Electrical Engineering
Raytheon Company Chair in Manufacturing Engineering
Charles P. Reames Endowed Chair in Electrical Engineering
Edward K. and Linda L. Rice Endowed Chair in Materials Science
Ben Rich Lockheed Martin Chair in Aeronautics
Rockwell Collins Chair in Engineering
William Frederick Seyer Chair in Materials Electrochemistry
Ronald and Valerie Sugar Endowed Chair in Engineering
Symantec Chair in Computer Science
Carol and Lawrence E. Tannas, Jr., Endowed Chair in Engineering
William D. Van Vorst Chair in Chemical Engineering Education
Winter Endowed Chair in Electrical Engineering

School of Law
Norman Abrams Endowed Chair in Law
Omar and Azemeralda Ali Chair in Islamic Law
Harry Graham Baiter Chair in Law
David A. Binder Endowed Chair in Clinical Law
Connell Professorship of Law
Dan and Rae Emmett Endowed Chair in Environmental Law
Rosalinde and Arthur Gilbert Foundation Endowed Chair in Civil Rights and Civil Liberties
Paul Hastings Endowed Chair in Business Law
Pete Kameron Endowed Chair in Law and Social Justice

MacArthur Foundation Chair in International Justice and Human Rights
Richard C. Maxwell Chair in Law
McDonald/Wright Chair in Law
Arjay and Frances Fearing Miller Chair in Law
Susan Westerberg Prager Endowed Chair in Law

*Honorable Harry Pregerson Endowed Chair in Law
David G. and Dallas P. Price Chair in Law
Michael H. Schill Endowed Chair in Law
Gary T. Schwartz Endowed Chair in Law
Security Pacific Bank Chair
Shirley Shapiro Endowed Chair in Environmental Law
Jonathan D. Varat Endowed Chair in Law
William D. Warren Chair in Law
Frank G. Wells Endowed Chair in Environmental Law

College of Letters and Science
Armen A. Alchian Chair in Economic Theory
Maurice Amado Chair in Sephardic Studies
Jahangir and Eleanor Amuzegar Chair in Iranian Studies
Joyce Oldham Appleby Endowed Chair of America in the World
George and Sakaye Aratani Chair in Japanese American Incarceration, Redress, and Community
Thomas M. Asher Endowed Chair in Microbiology
Paul D. Boyer Professorship in Molecular Biology and Biochemistry
Henry J. Bruman Chair in German History
Ralph Bunche Chair in International Studies
Dr. E. Bradford Burns Chair in Latin American Studies
Edward W. Carter Chair in Netherlandish Art
Morgan and Helen Chu Endowed Chair in Asian American Studies
James S. Coleman Chair in International Development Studies
James and Carol Collins Chair in College of Letters and Science
Lloyd E. Cotsen Chair in Archaeology
Norman Cousins Endowed Chair in Psychoneuroimmunology
D.J. and J.M. Gram Chair in Organic Chemistry
Charles E. Davidson Endowed Chair in Economics
De Logi Chair in Biological Sciences
A. Richard Diebold, Jr., Endowed Chair in Indo-European Studies
Navin and Pratima Doshi Chair in Indian History
Mr. and Mrs. C.N. Flint Professorship in Philosophy
Christopher S. Foote Chair
Evan Frankel Endowed Chair in English
Gloria and Paul Griffin Chair in Philosophy
Haruhisa Handa Professorship in Shinto Studies
John Charles Hillis Chair in Literature
Marvin Hoffenberg Chair in American Politics and Public Policy
Richard Hovannisian Chair in Modern Armenian History

The California Endowment

*Endowed Chair

Petra Kameron Endowed Chair in Law and Social Justice

MacArthur Foundation Chair in International Justice and Human Rights

Richard C. Maxwell Chair in Law

McDonald/Wright Chair in Law

Arjay and Frances Fearing Miller Chair in Law

Susan Westerberg Prager Endowed Chair in Law

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Michael H. Schill Endowed Chair in Law

Gary T. Schwartz Endowed Chair in Law

Security Pacific Bank Chair

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Gloria and Paul Griffin Chair in Philosophy

Haruhisa Handa Professorship in Shinto Studies

John Charles Hillis Chair in Literature

Marvin Hoffenberg Chair in American Politics and Public Policy

Richard Hovannisian Chair in Modern Armenian History
Appendix C: Endowed Chairs

UCLA Foundation Chair
UCLA Alumni and Friends of Japanese
Jean Stone Chair
Irving and Jean Stone Endowed Chair in Life Science
Steinmetz Chair in Classical Archaeology and Material Culture
Irving and Jean Stone Endowed Chair in Life Science
Irving and Jean Stone Endowed Chair in Physical Science
Irving and Jean Stone Endowed Chair in Humanities
Jean Stone Chair
UCLA Alumni and Friends of Japanese Ancestry Chair in Japanese American Studies
UCLA Foundation Chair

Steven F. and Christine L. Udvar-Hazy Chair
Alexander von Humboldt Endowed Chair in Geography
Walter and Shirley Wang Chair in U.S./China Relations and Communications
Eugen Weber Chair in Modern European History
Wendell Jeffrey and Bernice Wenzel Chair in Behavioral Neuroscience
Dean M. Willard Chair in Chemistry
Saul Weinstein Chair in Organic Chemistry
Linda and Fred Wudl Chair
Stanley M. Zimmerman Endowed Chair in Economics and Finance

John E. Anderson Graduate School of Management
Allstate Chair in Insurance and Finance
Andersen Worldwide Chair in Management
John E. Anderson Chair in Management
Marion Anderson Chair in Management
Arden Realty Chair
Robert D. Beyer '83 Chair in Management
California Chair in Real Estate and Land Economics
Edward W. Carter Chair in Business Administration
William M. Cockrum Professorship in Entrepreneurial Finance
James A. Collins Chair in Management
Warren C. Cordner Chair in Money and Financial Markets
Ernst and Young Chair in Accounting
Laurence D. and Lori W. Fink Endowed Chair in Finance
Henry Ford II Chair in International Management
Joel Fried Chair in Applied Finance
Lee and Seymour Graft Endowed Professorship
Goldyne and Irwin Hearsh Chair in Money and Banking
IBM Chair in Computers and Information Systems
Joseph Jacobs Chair in Entrepreneurial Studies
Neil Jacoby Chair in Management
Japan Alumni Chair in International Finance
Bud Knapp Marketing Professorship
Harry and Elsa Kunin Chair in Business and Society
J. Clayburn La Force Chair in Management
William E. Leonhard Chair in Management
Los Angeles Times Professor of Management and Policy
Chauncey J. Medberry Chair in Management
Peter W. Mullin Chair in Management
Howard Noble Chair in Management
Paine Chair in Management
George Robbins Chair in Management
Sanford and Betty Sigoloff Chair in Corporate Renewal
J. Fred Weston Chair in Finance
Harold Williams Chair in Management
Ho-Su Wu Chair in Management

David Geffen School of Medicine
William S. Adams, M.D., Chair in Medicine
Ahmanson Chair in Ophthalmology
Wallis Annenberg Endowed Chair in Integrative East-West Medicine
Leonard Apt Endowed Chair in Pediatric Ophthalmology
Archstone Foundation Endowed Chair in Gastroenterology
Casey Lee Ball Endowed Chair in Pediatric Nephrology
Wiley F. Barker Chair in Vascular Surgery
Dena Bat-Yacov Endowed Chair in Childhood Psychiatry and Biobehavioral Sciences
Ulrich Batzdorf, M.D., Chair in Spinal Neurosurgery
Lues De Beaumont Chair in Surgery
Jerome L. Belzer Chair in Medical Research
Lillian and Alvin L. Bergman Chair in Vascular Research
Bing Professorship in Urologic Research
Anna and Harry Borun Chair in Geriatrics/Gerontology
Bowyer Professorship in Medical Oncology
Saul Brandman Endowed Chair in Pulmonary Arterial Hypertension
Judson Braun Chair in Biological Psychiatry
Geri and Richard Brawerman Chair in Pediatric Neurosurgery
Eli and Edythe L. Broad Foundation Chair in Inflammatory Bowel Disease Research
Rubin Brown Chair in Pediatric Neurology
Joseph Campbell Chair in Child Psychiatry
Iris Cantor Chair in Breast Imaging
Edward W. Carter Chair in Internal Medicine
Castera Chair in Cardiology
Vincent and Stella Coates Chair in Molecular Neurobiology
Tony Coelho Chair in Neurology
Carol and James Collins Chair
William E. Connor Chair in Cardiothoracic Transplantation
Eliot Corday Chair in Cardiovascular Medicine and Science
Norman Cousins Endowed Chair in Psychoneuroimmunology
Crump Chair in Medical Engineering
Karen and Frank Dabby Endowed Chair in Ophthalmology
*Dr. Alfonsina Q. Davies Endowed Chair in Honor of Paul Crandall, M.D., for Epilepsy Research
M. Philip Davis Chair in Microbiology and Immunology
Robert and Kelly Day Chair in Cardiothoracic Surgery
Robert and Kelly Day Chair in General Surgery
Robert and Kelly Day Chair in Surgical Outcomes
Robert and Kelly Day Chair in Transplantation
Wini and William J. Dignam Chair in Obstetrics and Gynecology
John Bartley Dillon, M.D., Endowed Chair in Anesthesiology
Doumani Chair in Molecular Pharmacology
Ray and Carol Doumani Chair in Urological Oncology
Dumont-UCLA Chair in Transplantation Surgery
Max Factor Family Foundation Chair in Nephrology
Charles Kenneth Feldman Chair in Ophthalmology
Elise and Isaac Fogelman Endowed Chair in Pediatric Neurology
Appendix C: Endowed Chairs / 681

Henry E. Singleton Chair in Urology
Jack H. Skirball Chair in Multiple Sclerosis
Jack H. Skirball Chair in Ocular Inflammatory Eye Disease
Jack H. Skirball Chair in Pediatric Cardiology
*P. Gene and Elaine Smith Endowed Chair in Alzheimer’s Disease Research
Rebecca Smith Chair in A-T Research
Jerome and Joan Snyder Chair in Ophthalmology
George F. Solomon Professorship in Psychiatry
Norman F. Sprague Chair in Molecular Oncology
Fran and Ray Stark Foundation Chair in Digestive Diseases
Fran and Ray Stark Foundation Chair in Ophthalmology
Fran and Ray Stark Foundation Chair in Urology
Frances Stark Chair in Neurology
Jules Stein Chair in Ophthalmology
Michael and Sue Steinberg Endowed Chair in Global AIDS Prevention and Policy Research
W. Eugene Stern Chair in Neurosurgery
Ruth and Raymond H. Stotter Chair in Neurosurgery
Bradley R. Straatsma, M.D., Endowed Chair in Ophthalmology
Dorothy and Leonard Strauss Chair in Gastroenterology in Memory of Gussie Borun
Streisand Chair in Cardiology
Dr. George Tarjan Chair in Mental Retardation
Michael E. Tennenbaum Family Endowed Chair in Creativity Research
Leon J. Tiber, M.D., and David S. Alpert, M.D., Chair in Medicine
Vernon O. Underwood Family Chair in Ophthalmology
Philo Woodrow Van Wagoner Professorship Variety Club–D. Barry Reardon Endowed Chair in Pediatric Hematology/Oncology
Richard D. and Ruth P. Walter Chair in Neurology
Wasserman Professor of Ophthalmology
David Weil Chair in Psychiatry and Biobehavioral Sciences
Dr. Louis Jolyon West Chair in Psychiatry
Judith and Robert Winston Chair in Pediatric Urology

School of Nursing
Lulu Wolf Hassenplug Chair in Nursing
Audrienne H. Moseley Chair in Biological Nursing Science
Audrienne H. Moseley Chair in Community Health Research
Audrienne H. Moseley Chair in Nursing
Audrienne H. Moseley Chair in Women’s Health Research

Meyer and Renee Luskin School of Public Affairs
Marjorie Crump Chair in Social Welfare
Luskin Endowed Chair for Dean of the School of Public Affairs
Harvey S. Perloff Chair
APPENDIX D: Distinguished Teaching Awards

Academic Senate Recipients

Each year the UCLA Alumni Association presents Distinguished Teaching Awards to six Academic Senate faculty members. The highly prized awards are presented at the annual Andrea L. Rich Night to Honor Teaching, and selection of recipients is based on recommendations of the Academic Senate Committee on Teaching. Nominations are solicited from academic departments during Fall Quarter.

The Luckman Distinguished Teaching Awards Program was established in late 1991 after receipt of a generous gift from Harriet and Charles Luckman. Awards given for 1992 through 1997 were named the Luckman Distinguished Teaching Awards in honor of Charles Luckman. Awards given for 1992 through 1997 were named the Luckman Distinguished Teaching Awards in honor of Charles Luckman.

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Jonathan and Karin Fielding School of Public Health
Fred H. Bixby Chair in Population Policy
Fred W. and Pamela K. Wasserman Endowed Chair in Health Services

School of Theater, Film, and Television
David C. Copley Chair for Study of Costume Design
Lew and Pamela Hunter/Jonathan and Janice Zakin Chair in Screenwriting
Rouben Mamoulian Visiting Chair in Film Directing
Rouben Mamoulian Visiting Chair in Theater Directing

UCLA Chancellor's Office
Betsy Wood Knapp Chair in Innovation and Creativity

UCLA International Institute
Rosalinde and Arthur Gilbert Foundation Endowed Chair in Israel Studies
Dong Soon Im and Mi Ja Im Endowed Chair in Korean Christianity
Paul I. and Hisako Terasaki Chair in Contemporary Japanese Studies
Paul I. Terasaki Chair in U.S.-Japanese Relations

APPENDIX D: 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. Hagge (Germanic Languages)
Wendell P. Jones (Education)
Robert H. Sorgenfrey (Mathematics)
Saul Weinstein (Chemistry and Biochemistry)

1964
Mostafa A. El-Sayed (Chemistry and Biochemistry)
Leon Howard (English)
Moshe F. Rubinstein (Civil and Environmental Engineering)

1965
E.A. Carlson (Biology)
W.R. Hitchcock (History)
Allen Parducci (Psychology)
William R. Romig (Microbiology and Molecular Genetics)

1966
George A. Bartholomew (Biology)
William 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. Hobs (Political Science)
J.E. Phillips (English)
Raymond M. Redheffer (Mathematics)
Margret 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. Ladehofoged (Linguistics)
Arthur D. Schwabe (Medicine)
Duane E. Smith (Political Science)
Andreas Tietze (Near Eastern Languages and Cultures)

1972
Barbara K. Keogh (Education)
James N. Miller (Microbiology and Immunology)
David S. Rodes (English)
Ned A. Shearer (Speech)
Charles A. West (Chemistry and Biochemistry)

1973
Kirby A. Baker (Mathematics)
David Evans (Chemistry and Biochemistry)
Albert Hoxie (History)
Nhan Levan (Electrical Engineering)
Judith L. Smith (Physiological Science)

1974
Robert B. Edgerton (Anthropology, Psychiatry and Biobehavioral Sciences)
David S. Eisenberg (Chemistry and Biochemistry)
Victoria A. Fromkin (Linguistics)
Robert C. Neerhout (Pediatrics)
Andrea L. Rich (Speech)

1975
Alma M. Hawkins (World Arts and Cultures)
Morris Holland (Psychology)
Paul M. Schachter (Linguistics)
Stanley A. Wolpert (History)
Richard W. Young (Neurobiology)

1976
Marianne Celce-Murcia (Teaching English as a Second Language and Applied Linguistics)
Jesse J. Duckminier (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 Schoepf (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. Braumuller (English)
Fredi Chiappelli (Italian)
Kenneth L. Karst (Law)
Richard F. Logan (Psychology)
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)
Appendix D: Distinguished Teaching Awards / 683

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 (Management)
Sandra A. Thompson (Sociology)
Jeffrey Prager (Sociology)
Eugen W. Wacker (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. Bergren (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 Yenser (English)
Eric M. Zolt (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. Kelloff (Sociology)
Eugene Weber (History)

1993
Calvin B. Bedient (English)
Richard B. Kaner (Chemistry and Biochemistry)
Katherine C. King (Classics)
William G. Ouchi (Management)
Bruce Schulman (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
Utpal Banerjee (Molecular, Cell, and Developmental Biology)
Christine D. Gutierrez (Education)
Susan McClary (Musicology)
Arnold B. Scheibel (Neurobiology, Psychiatry and Biobehavioral Sciences)
Ivan Szelényi (Sociology)

1998
George W. Bernard (Dentistry)
Verónica Cortesín (Spanish and Portuguese)
Wayne A. Dowell (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 Cristal (Spanish and Portuguese)
Hector F. Myers (Psychology)
David Sklansky (Law)
Robert J. Watson (English)

2001
Michael J. Colacurcio (English)
Glen M. MacDonald (Geography)
Kevin Terracciano (History)
James W. Trent (Education)
Brian Walker (Political Science)

2002
Christopher R. Anderson (Mathematics)
Steven G. Clarke (Chemistry and Biochemistry)
Anne K. Mellor (English)
Lee Todd Miller (Pediatrics)
Grant S. Nelson (Law)

2003
Joseph J. DiStefano III (Computer Science, Medicine)
Robin L. Garrell (Chemistry and Biochemistry)
A.P. Gonzalez (Film, Television, and Digital Media)

2004
Mitchell B. Morris (Musicology)
Kirk J. Stark (Law)

2005
Roger Bourland (Music)
Robert G. Faveli (Atmospheric and Oceanic Sciences)
Elma González (Ecology and Evolutionary Biology)

2006
Robert A. Gurval (Classics)
Patricia M. McDonough (Education)
Albert J. Moore (Law)
Kenneth A. Nagy (Ecology and Evolutionary Biology)

2007
John A. Agnew (Geography)
Devon Carbado (Law)
Valerie J. Matsumoto (Asian American Studies, History)
Behzad Razavi (Electrical Engineering)
Daniel G. Solórzano (Education)
Blaire Van Valkenburgh (Ecology and Evolutionary Biology)

2008
Elizabeth L. Bjork (Psychology)
Peggy M. Fong (Ecology and Evolutionary Biology)
Linda C. Garro (Anthropology)
Teofilo F. Ruiz (History)
Benjamin J. Schwartz (Chemistry and Biochemistry)

2009
Robert S. Winter (Music)

2010
Roger Detels (Epidemiology)
Luisa M. Iruela-Arispe (Molecular, Cell, and Developmental Biology)
Yung-Ya Lin (Chemistry and Biochemistry)
Mark B. Moldwin (Earth and Space Sciences)
Susan J. Plann (Applied Linguistics and Spanish and Portuguese)
Janice L. Reiff (History)
Appendix D: Distinguished Teaching Awards

2012
C. Cindy Fan (Geography)
Brandon Koretz (Geriatric Medicine)
Mignon R. Moore (Sociology)
Claudia Parodi-Lewin (Spanish and Portuguese)
Jonathan P. Stewart (Civil and Environmental Engineering)
Christopher S. Tang (Management)

2013
Michael F. Carey (Biological Chemistry)
John J. Colicelli (Biological Chemistry)
Rachelle H. Crosbie-Watson (Integrative Biology and Physiology)
Jonathan H. Grossman (English)
Lynn A. Hunt (History)
David Delgado Shorter (World Arts and Cultures/Dance)
Megan McDonnell Sweeney (Sociology)

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. Luceugh (Chemistry and Biochemistry)
Cheryl Plof (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)
Jutta 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 Tangerlini (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 (Geology/International Development Studies)
Sandra Mano (Writing Programs)
L. Jean Perry (Molecular, Cell, and Developmental Biology)

2002
Steven Hardinger (Chemistry and Biochemistry)
Colleen K. Keenan (Nursing)
Cynthia Merrill (Writing Programs)

2003
Marjorie A. Bates (Chemistry and Biochemistry)
Anita McCormick (Writing Programs)
Richard Stevenson III (Dentistry)

2004
Andrew Hsu (Philosophy)
Kimberly Jansma (French and Francophone Studies)
Jennifer Westbay (Writing Programs)

2005
Susan Griffin (Writing Programs)
William Grisham (Psychology)
Anahid Keshishian (Near Eastern Languages and Cultures)

2006
Roger E. Bohman (Molecular, Cell, and Developmental Biology)
Jo Ann Damron-Rodriguez (Social Welfare)
Gerald Wilson (Ethnomusicology)

2007
Nancy Ezer (Near Eastern Languages and Cultures)
Fred A. Hagigi (Health Services)
Eric Marin (Film, Television, and Digital Media)

2008
Leigh C. Harris (Writing Programs)
Chi Li (Ethnomusicology)
Robert B. Trelease (Pathology and Laboratory Medicine)

2009
Brent Corbin (Physics and Astronomy)
Laurence Lavelle (Chemistry and Biochemistry)
Fariba Younai (Dentistry)

2010
Patrick D. Goodman (Law)
Amy H. Kaji (Medicine)
Rory M. Kelly (Film, Television, and Digital Media)

2011
Latifeh E. Hagigi (Near Eastern Languages and Cultures)
Dario Nardi (Anthropology)
John (Jay) Phelan (Life Sciences Core Curriculum)

2012
Stuart Biegel (Education)
Ronald Cooper (Integrative Biology and Physiology)
Michael Lazarus (Medicine)

2013
Randall J. Fallows (Writing Programs)
Ganna Kudyma (Slavic Languages and Literatures)
Joan R. Schleper (Nursing)

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)

1990-92
Jeffrey C. Alexander (Sociology)
1992-94
J. William Schopf (Earth and Space Sciences)
1994-96
Albert R. Braunmuller (English)
1996-98
Peter M. Narins (Physiological Science)
1998-00
Robert B. Goldberg (Molecular, Cell, and Developmental Biology)
2000-02
Utpal Banerjee (Molecular, Cell, and Developmental Biology)
2002-04
Richard B. Kaner (Chemistry and Biochemistry)
2004-06
Andrea M. Ghez (Physics and Astronomy)
2006-08
Robert N. Watson (English)

2007-09
William J. Kaiser (Electrical Engineering)
2008-10
Alicia Gaspar de Alba (Chicana and Chicano Studies)
2009-11
Robin L. Garrell (Chemistry and Biochemistry)
2010-12
David H. Gere (World Arts and Cultures)
2011-13
Matthew D. Lieberman (Psychology)
2012-14
Kevin B. Terraciano (History)
2013-15
Luisa M. Iruela-Arispe (Molecular, Cell, and Developmental Biology)
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